

Project Evaluation Report

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Notes:

Some annexes listed in the contents page of this document have not been included because of challenges with capturing them as an A4 PDF document or because they are documents intended for programme purposes only. If you would like access to any of these annexes, please enquire about their availability by emailing uk_girls_education_challenge@pwc.com

Discovery Project 2

Baseline Evaluation Report

FINAL

Oxford Policy Management

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List of abbreviations

ASCR	Annual School Census Report
ATET	Average Treatment Effect on the Treated
BOM	Board of Management
CAMFED	Campaign for Female Education
CAP	Community Action Plan
CEM	Coarsened Exact Matching
CEM-DID	Coarsened Exact Matching Difference in Differences
CRE	Calculus Readiness Exam
DFID	Department for International Development
DID	Difference-in-Difference
DLA	Discovery Learning Alliance
DP	Discovery Project
DVD	Digital Video Disc
EGMA	Early Grade Maths Assessment
EGRA	Early Grade Reading Assessment
EMIS	Education Management Information System
ESPR	Education Sector Performance Report
FBE	Free Basic Education
FGD	Focus Group Discussion
FGM	Female Genital Mutilation
FoU	Framework of Understanding
GEC	Girls' Education Challenge
GEC-T	GEC Transition
GPS	Global Positioning System

GSE	General Self-Efficacy
ICC	Intra-Cluster Correlation
ITT	Intention to Treat
JSS	Junior Secondary School
KII	Key Informant Interview
LGA	Local Government Area
LOI	Language of Instruction
M&E	Monitoring and Evaluation
MBW	My Better World
MDE	Minimum Detectable Effects
MEL	Monitoring, Evaluation, and Learning
MoE	Ministry of Education
MoST	Ministry of Science and Technology
MoU	Memorandum of Understanding
NGO	Non-Governmental Organisation
OECD-DAC	Organisation for Economic Co-operation and Development – Development Assistance Committee
OPM	Oxford Policy Management
PPI	Poverty Probability Index
PSU	Primary Sampling Unit
PTA	Parent–Teacher Association
PTE	Primary Teacher Education
PTR	Pupil–Teacher Ratio
RGA	Research Guide Africa
SBMC	School Board Management Committees
SeGMA	Secondary Grade Maths Assessment

SeGRA	Secondary Grade Reading Assessment
SMC	School Management Committee
SUBEB	State Universal Basic Education Bureau
TBE	Theory-Based Evaluation
TEGINT	Transforming Education for Girls in Nigeria and Tanzania
ToC	Theory of Change
TPD	Teacher Professional Development
UBEC	Universal Basic Education Commission
UIS	UNESCO Institute of Statistics
UNESCO	United Nations Educational, Scientific and Cultural Organisation
VfM	Value for Money
WPM	Words Per Minute

Executive summary

The Discovery Project is a multi-country (Kenya, Ghana, and Nigeria) project that aims to increase girls' self-esteem, aspirations, and academic and life skills, which combined with improved teaching and an increasingly enabling environment will facilitate girls' learning, completion of primary and secondary school cycles, and pursuit of their education and life goals. It does this through the introduction and use of sustainable technology, quality educational content and teacher professional development (TPD), a life skills print and visual curriculum for girls' clubs, and fostering enabling environments at the community level and beyond. The first phase of this project (referred to as DP-1) ran from 2014 to 2017. The second phase (referred to as DP-2) builds on the success and impact of DP-1 and will span from 2017 to 2020 across the three countries. DP-2 is currently working with the same schools that were part of DP-1 and new additional secondary and junior secondary schools (JSS). The focus of this evaluation and report will be on DP-2.

DP-2 operates in a range of marginalised areas with varying contexts across the three countries. The project has factored these differences into the design and implementation of the project in each country.¹ Although there are contextual differences between the countries, some commonalities are notable: these include governments' education policies and priorities, educational outcomes, and persistent barriers to marginalised girls' learning and transition. For instance, primary education is free and compulsory for all school-aged children, across the three countries, and girls tend to face significant economic and social barriers to learning and transition, especially as they reach adolescence toward the end of the primary cycle and look to transition to JSS. Economic barriers relating to poverty are especially pronounced in most of the marginalised communities.

The underlying theory behind DP-2 is that, in contexts where marginalised girls face various socioeconomic and cultural barriers (e.g. early or forced marriage, affordability of school, and perceived value of education, specifically girls' education) and education facilities and the quality of education are lacking, girls' abilities to enrol, regularly attend, learn, and continue their schooling are greatly constrained. The DP-2 design takes a holistic approach of investing in activities that aim to improve the quality of education, self-efficacy of girls, and engagement of community members in schooling. It does this through the introduction and use of sustainable technology, quality educational content and TPD, life skills programming for clubs, and fostering more enabling environments at the school and community level to successfully address the barriers and achieve improvements in girls' attendance, learning (literacy, numeracy, and self-efficacy), and transition through primary and on to secondary school.

Girls across all primary and JSS grades are the primary target group for DP-2. Within this broader population, the project is focusing its teaching and learning interventions on mid to upper primary, specifically 154,117² girls in primary 4, 5, and 6 across 414 schools in Kenya, 500 in Nigeria, and 487 in Ghana. The total number of girl beneficiaries for all three countries is 461,351 (204,031 in Nigeria, 104,365 in Ghana, and 152,955 in Kenya) and is based on the assumption that, due to the nature of instruction in project schools, all girls (and boys as secondary beneficiaries) can be said to be reached by the project.³

¹ Discovery Learning Alliance Proposal, 2016 -2017

² This figure and the figure for total project reach are based on OPM estimates of enrolment.

³ This reflects the experience of the project that the materials and training provided by the Discovery Learning Alliance (DLA) are used across all years. Note that this number does not include an estimated 20,000 girls in secondary school in Kenya as those schools will receive less rigorous training for teachers but will still be supplied with all learning materials and club support.

Evaluation

The evaluation for DP-2 uses a Theory-Based Evaluation (TBE) approach and is designed as a quasi-experimental impact evaluation to quantify and attribute the impact of DP-2 on learning and transition by employing mixed methods to address the evaluation question around DP-2. In particular, we apply Contribution Analysis and Coarsen Exact Matching – Difference-in-Difference (CEM-DID) approaches where both are combined to measure changes in final outcome variables and unpack how changes will take place at the endline. The TBE uses as its foundation the project theory of change (ToC) and allows us to better examine the causal links between DP-2 activities and outputs and expected intermediate outcomes and impacts. Given the complexity of the project, in which a number of interlinked interventions are expected to contribute to headline impacts against *learning, transition, and sustainability*, our TBE approach will also look into unpicking the linkages between project activities, outputs, intermediate outcomes, and final outcomes. To the degree possible, we do this to understand the contribution that the various project interventions have made toward achieving progress against headline outcomes.

The baseline evaluation examines the plausibility of the ToC by reviewing stakeholders' understanding of DP-2, interrogating the key causal assumptions of the project logic and identifying factors that have a key bearing on the achievement of the stated intermediate outcomes and impacts. It also explores the baseline situation in the sample schools for this evaluation with regards to girls' learning outcomes, attendance, transition, and classroom teaching practices.

Profile of project beneficiaries and barriers to learning and transitions

DP-2 targets marginalised groups with a long history of exclusion. All DP-2 schools include schools in areas with low local economic development, with limited educational resources, and with low educational capacity. Therefore, according to DP-2, all girls (and boys) attending schools targeted by DP-2 are considered to be marginalised. Most girls are aged between nine and 13 years, with girls in Ghana tending to be slightly older than girls in Nigeria and Kenya. The proportion of girls in the sample that have a disability is slightly higher than national or regional averages for similar age groups reported elsewhere. Given that the number of girls with disabilities in the sample is small in absolute terms, we are not able to meaningfully report on the barriers to learning and transition that girls with disabilities may face in particular.

Our analysis allows us to conclude that the main drivers of girls' educational marginalisation in all three countries are poverty and extreme poverty and the remote and rural locations where children live. The country-specific drivers include inadequate school infrastructure, lack of teachers and overcrowded classes in Nigeria, lack of school space in Ghana, lack of qualified teachers in non-formal schools and the semi-arid/arid regions of Kenya, as well as unsafe journeys to school. The common barriers to the girls' education tend to prevail for all the project outcomes while the country-specific barriers are likely to vary from outcome to outcome.

This baseline analysis allows for the opportunity to update the ToC's demand- and supply-related barriers. Interestingly, socio-cultural norms – i.e. attitudes and beliefs among parents, community members, and boys – are not major constraining factors to girls' education. Therefore, we could conclude that biased views toward girls' education are minor and are not cultural as such but more economic, given that poverty is the primary factor affecting the project population. This means that such a barrier, where it exists, can be eliminated if poverty is tackled or the opposite remains despite the project efforts until these households are lifted out of poverty.

Given these drivers of marginalisation, our analysis shows that there are specific groups of children who are at more risk of not having equal chances to stay and succeed at school. These ‘at-risk’ groups are those who have multiple characteristics of marginalisation since most of the DP-2 child population manage to attend and transition despite their relatively poor standards of living.

- In particular, for the case of Nigeria, children living in extreme poverty, households in rural locations, orphaned children, and children living with single parents are more likely to attend schools with inadequate facilities, learn in overcrowded classrooms, and live further from secondary schools. Also, girls are more likely to be helping with agricultural work, a family business, or other work outside the home.
- In Kenya, girls from poor households and living in semi-arid/arid regions are more likely to attend schools with poorer facilities, learn in overcrowded classrooms, and live further from the nearest secondary school. Moreover, girls living in informal settlements, and particularly those attending non-formal schools where the quality of teaching is a big issue, are more likely to have large numbers of un- or underqualified teachers and high teacher turnover within their schools.
- In Ghana, children living in extreme poverty, children living with single parents, and children with disabilities are more likely to learn in overcrowded classrooms, live further from secondary schools, and are more likely to be helping with agricultural work, a family business, or other work outside the home. These ‘risk’ group children require special attention from DP-2 to help them have equal chances to attend school and transition.

Outcome indicators

Learning

Literacy and numeracy learning levels differ by country.

- **English literacy levels are extremely low in Nigeria.** The vast majority of pupils in Nigeria are not able to read in English. That English is not the language of instruction (LOI) in most schools, that teachers feel less comfortable speaking English, and that pupils get low exposure to English at home are likely to contribute to this.
- **The majority of pupils in Ghana are not yet able to read with comprehension.** Approximately 60% of pupils are reading at a speed of less than 45 words per minute (WPM), which international research has suggested as a lower boundary of the speed at which pupils begin to read with comprehension. In line with this, 60% of pupils cannot answer a single comprehension question based on the text read.
- **English literacy outcomes are the highest in Kenya.** The majority of pupils can read at speeds that are generally considered necessary for reading with comprehension. Despite this, only 9% of pupils are proficient in reading comprehension, meaning they score 81% or higher on the comprehension questions. One of the explanations for this could be that some schools in Kenya have ‘book clubs’ that might boost their reading skills and that these children speak English at home.
- **Numeracy outcomes in Nigeria are generally low, but there are a range of ability levels.** A fifth of pupils are not able to orally identify a one-digit number and half the pupils are not able to answer a simple one-digit subtraction question.
- **Numeracy outcomes are substantially higher in Ghana and Kenya.** Pupils in Ghana and Kenya perform well on procedural tasks, but less well on conceptual numeracy tasks, such as

number pattern recognition and solving word problems. The majority of pupils cannot yet perform advanced number operations.

These findings imply that pupils across the three countries are not performing at the level expected by the curriculum, mainly in English literacy for Ghana and Nigeria and numeracy for Nigeria. Nigeria has poor results in both skills areas, which can be partly explained by a poor command of English among children, their teachers, and parents. Doing poorly at school and ultimately at exams could partially explain why half of the Nigerian children do not transition to JSS. Until the language issue is resolved, we assume that the current baseline performances of children in numeracy and literacy are unlikely to progress despite investment in the training of teachers in Nigeria. Pupils who are lacking the foundational building blocks for literacy and numeracy are unlikely to improve if teachers continue to focus on the content that is expected by the curriculum. The remedial classes that DP-2 is incorporating are likely to be particularly relevant in this regard, but are unlikely to be sufficient if the majority of pupils are not performing at expected levels. DP-2 will also need to consider how to tailor the literacy and numeracy training to what pupils (and teachers) know.

Perceptions of differences by gender

The performance of girls and boys in numeracy and literacy, according to parents and teachers, vary from one country to another.

- The general perception among respondents in Nigeria is that girls perform better than boys. The reasoning is that boys are often 'playful' while girls are dedicated and have higher attendance rates. In Nigeria, the main belief prevalent is that girls should study only until they complete secondary school and then get married.
- When discussing children's performance, the responses were quite mixed in Ghana. Some parents and communities mentioned that girls performed better than the boys, while some stated that the boys did better. Teachers believe that the support that girls have received has resulted in them performing better than boys, but teachers, as well as parents, also suggest that girls are often busier with household chores in comparison to boys who have more time to study.
- In Kenya, teachers suggest that boys are lagging behind academically and need more attention than girls. Some other barriers to learning outcomes that are gendered are early pregnancy and menstruation, which affect girls' attendance and performance in the classrooms. In all three countries, teachers suggest boys perform better in mathematics, while the girls do better with languages.

We have seen earlier that all countries demonstrate relatively high rates of attendance and transition, but this has not translated yet to good performance on learning outcomes. In other words, the majority of children of the marginalised population are attending schools, as well as progressing through primary school, and then transitioning to secondary school (though rates of transition to JSS are lower in Nigeria).

However, good attendance does not automatically lead to good learning outcomes. Children at most risk of having low numeracy and literacy scores, according to our analysis, are those living in extreme poverty. From our earlier findings, we know that children living in extreme poverty tend to live in remote and rural areas where schools tend to have poor infrastructure and are situated a long distance away from one another. It would not be unreasonable to assume that these schools are likely to have less-qualified teachers and suffer from a range of other misfortunes associated with the school, teacher, and household characteristics. As a result, there is a group of children among the marginalised population that are hard to reach.

DP-2 assumes that teacher training (in conjunction with follow-up monitoring and teacher coaching) as well as educational media, remedial classes, girls' clubs, and Community Action Plan (CAP) activities will directly or indirectly lead to better learning outcomes. However, there is evidence (see Chapter 1) to suggest that this is not a straightforward process. In particular, teacher training does not automatically transform into better learning outcomes given a range of contextual factors hindering this process, including the English language issue, class size, teacher turnover, and lack of teachers in Nigeria, lack of school space in Ghana, hungry children in Kenya, etc. The contextual barriers to effective teacher training can particularly hit those hard-to-reach marginalised groups. Moreover, there is no guarantee that marginalised girls would enrol in girls' clubs since they do not meet the ordinary profile of club members. Also, we can assume that parents and community members in impoverished settlements are poorly educated and have less bargaining power in their respective communities. The inequality in social status relative to head teachers may, therefore, limit their capacity to hold their schools accountable to deliver. This could mean that these communities are not in a good position to develop effective CAPs and act in the interests of those girls in most need. Therefore, it is reasonable to suggest that girls in the most marginalised households facing multiple barriers to their education and suffering from multiple drivers of marginalisation would not be able to benefit from DP-2 as much as their counterparts who are less marginalised.

Self-efficacy

We find that girls' self-efficacy is setting based, meaning that it is expressed in two main settings – school and home. It is clear that girls wish to succeed in both settings and do well as pupils and daughters and possess the skills required to do so. It is also clear that their judgement of their own capabilities and ability to act on these capabilities are hindered and promoted by their teachers, parents, and boys (alongside others including siblings, friends, etc.). Therefore, although the self-efficacy concept presupposes it is constructed by the 'self', it is done so through the prism of others' attitudes to and relationships with the girls. This suggests that self-efficacy is dependent on the context and is individual but at the same time collective such that girls sharing similar contexts could have self-efficacy of shared nature. Thus, we suggest that self-efficacy is affected by the drivers of marginalisation and ultimately informs girls' abilities to attend, retain, and successfully transition. Girls from extremely marginalised areas could have lower self-efficacy due to multiple barriers for their education. General self-efficacy (GSE) scores across all three countries and between treatment and control groups are relatively similar, between 60 and 70 on a scale that runs from 0 to 100. There is no statistically significant difference in mean self-efficacy scores between those in the treatment and control groups, for all countries.

Transition

The baseline transition rate for all three countries is 100% since the evaluation has taken a joint sample approach where all cohort girls are selected from within schools. In Nigeria and Ghana, the key transition points are within primary school, i.e. primary 5 to 6, and from primary school to JSS, i.e. primary 6 to JSS-1. Girls that transition to non-formal education or technical, vocational or employment training after primary 6 will be considered as successfully transitioned. In Kenya, the transition points are all within primary school, i.e. primary 5 to 6 and primary 6 to 7. Successful transition in Kenya will only be considered for girls that remain within the school or formal education.

The primary completion rate is mixed across the countries according to secondary data, where Ghana has a rate of 99% (Education Sector Performance Report (ESPR), 2015), Kenya 77.7% (Ministry of Science and Technology (MoST), 2014), and Nigeria 96% (Annual School Census Report (ASCR), 2016/17). Transition rates from primary 6 to JSS-1 in Ghana and Nigeria were at 93% (UNESCO Institute

of Statistics (UIS) 2016) and 47% (ASCR, 2016/17). With the exception of Nigeria, both primary completion and transition rates shows that most of the children manage to transition regardless of their marginalisation and barriers to their education. However, from our analysis in Chapter 3 we know that there are specific groups of girls in each country who are likely to struggle to attend school regularly and are at risk of dropping out. In Nigeria, these children are those living in extreme poverty, in households in rural locations, who are orphaned, and those living with single parents. In Kenya, the most at-risk children live in poverty, are from nomadic and pastoralist communities in Wajir and Kajiado, and those who live in informal settlements in Nairobi (particularly those attending non-formal schools). In Ghana, key subgroups targeted by DP-2 include children living in extreme poverty, children living with single parents, and children with disabilities. These profiles of DP-2 target child population could represent those children who struggle transiting due to a range of barriers.

The biggest and most common barrier to transition is reported to be poverty and parents struggling to pay school-related expenses in all three countries. Other contributing factors to children's transition and particularly to girls' transition could be early marriage (in Ghana and Nigeria particularly), relocation/migration (across the three countries, particularly in Ghana and Wajir in Kenya), very few parents valuing girls' education and preferring their daughters to marry before they get 'old' (in Nigeria and Wajir), distance (in Nigeria) and unsafe journeys to school, and pregnancy (in Kenya). In addition, older girls might find it difficult to socialise within a new environment when they enter JSS. Children could generally be intimidated and have lower self-efficacy. However, this argument is proven wrong in Ghana where the transition rates are high despite the fact that girls entering JSS in Ghana tend to be slightly older than girls in Nigeria and Kenya. This can be explained by the fact that girls in Ghana tend to start school later as a norm rather than an exception and therefore older girls are not particularly disadvantaged.

We can conclude that there are individual barriers to girls' transition to secondary school and within primary school, some of which are common across the countries and some of which are country specific. Some of these factors such as such as poverty are issues that DP-2 cannot address and, therefore, the programme's interventions are unlikely to change the underlying factors of dropping out, absenteeism, and ultimately poor learning outcomes. However, these barriers are particularly hard to address in the case of those households who suffer from multiple drivers of marginalisation, when originally separate barriers become a joint magnitude force that is considerably harder to address.

Sustainability

The sustainability strategy for DP-2 has a heavy focus at the school and community level in terms of generating support and ultimately ownership for project activities at this level, which includes the generation of resources to ensure the continuation of project activities. At the same time, DP-2 recognises the need to support change at grassroots level with government mainstreaming of activities to achieve systemic change, which it hopes to achieve through direct engagement with the MoE at different levels and involving MoE staff in project planning and implementation.

At the baseline stage of the evaluation we find that across the three countries there has been varying degrees of success in the mobilisation of communities. Nigeria appears the most well advanced in this regard and the baseline findings suggest that the CAP process is well valued and some communities have demonstrated a capacity to mobilise resources that address barriers to education. We find similar patterns in Kenya as well as in Ghana, although to a lesser degree. It is also worth noting that the final evaluation of DP-1 suggested that there was some evidence to suggest that the CAP process had had some success in mobilising resources. Indeed, DLA's own monitoring of DP-1 suggests that on average

over the three countries just under 60% of CAPs had been implemented at least in part, with interventions ranging from support to school infrastructure, funding to secure learning centres, and support to marginalised children. However, securing of funds at this level remains a concern, particularly for more marginalised communities.

At the level of the school, DP-2 is providing support to schools to develop sustainability plans for continuation of project activities. Again, in this case Nigeria seems to be the most advanced in terms of the evidence the baseline qualitative research found against the development of sustainability plans, followed by Kenya and then Ghana. At the level of the school, a key threat to the sustainability of the programme remains high rates of teacher turnover (for example, the final evaluation report for DP-1 noted that in Nigeria about 59% of DP-trained teachers had transferred to other schools in the year prior to the final round of research). DP-2's approach to mitigating this is through intensive support to both resource teachers as well as local MoE staff who have been trained by the project. However, this does mean that the project is reliant on several key individuals: the resource teachers trained by the project may also transfer to other schools, while local MoE staff may also leave or transfer elsewhere, meaning that their support is under threat until this training has been internalised into in-service training by the MoE.

At the level of the system, DP-2 is active in engaging with the MoE at different levels. In all countries, DP-2 has engaged at the relevant national or sub-national levels. In Nigeria, a Memorandum of Understanding (MoU) has been signed with the State Universal Basic Education Bureau (SUBEB) in Kano, which perhaps makes activities at this level the most robust in comparison to, for example, in Kenya where letters of encouragement and authorisation have been provided at the national level but MoUs have been signed with individual schools. DP-2 assumes that the support provided by the MoE will not require any additional resources, and that local MoE staff will be able to carry out teacher training and coaching as part of their regular monitoring and school visits. However, it is worth further interrogating this assumption, and this will certainly be carried out as part of this evaluation, given the findings of the DP-1 final evaluation report that funding at this level remained a concern, particularly when there are multiple initiatives that compete for local MoE staff time – and the qualitative research conducted for this baseline round of research suggests that this remains a concern. To achieve higher scores against sustainability at this level, DP-2 will need to work toward the regularisation of MoE support into education sector strategies and budgets. It is in this regard that the Department for International Development (DFID) should consider providing additional support to DP-2 given its access at these levels, and given that it would have the ability to lobby the relevant national or sub-national governments on behalf of multiple Girls' Education Challenge – Transition (GEC-T) projects.

Intermediate outcomes

Attendance

Overall attendance rates at baseline are relatively high across the three countries – over 90% for Ghana and Kenya and 81% for Nigeria. The attendance rates at baseline are very encouraging but some girls occasionally miss school, come late, and/or are sent back home for not paying their fees on time. **Attendance-keeping practices seem to be relatively good in Ghana, and somewhat in Kenya, but there are irregularities in the way teachers keep records of attendance on a daily basis. However, there are significant concerns in Nigeria overall.** Therefore, we would suggest applying some caution in the interpretation of the baseline attendance levels. In light of these concerns, and the fact that attendance is a key intermediate outcome indicator for the project, we would strongly encourage the DLA country teams to work closely with schools through their monitoring visits to encourage and monitor attendance-keeping practices, particularly in Nigeria.

Regarding barriers to attendance, we suggest that factors affecting school attendance are complex and deeply dependent on the marginalisation characteristics of households. The barriers to schooling in all three countries were less related to community attitudes and more intertwined with financial constraints, such as the ability to buy school supplies or a necessity to do paid and unpaid work to improve family well-being, with specific seasonal environmental factors (droughts and floods) also factors that prevent children from attending school regularly. Communities and parents in all three countries generally reported a positive attitude toward educating their daughters and expressed that better schooling meant more opportunities for them to succeed in their lives and become financially independent. In addition to common barriers to attendance, we find some country-specific constraining factors affecting girls' ability to attend school regularly. These are: menstruation and hunger in Ghana and Kenya; illness and caring for family members in Kenya; children in adopted families being required to look after family members in Ghana; and religious holidays in Nigeria. Girls reported having more work than boys in Ghana and tend to work before school and come to school late. In Kenya, girls and boys tend to do gendered tasks where boys complete more physical work outside their houses and therefore end up being away from home and miss school for a longer term than girls.

Attendance as a project outcome is assumed to be achieved through all the three causal pathways, where teacher training and educational media, girls' clubs, and CAPs are supposed to improve school attendance. However, based on the literature review discussed in Chapter 1, we find that the causal links between the attendance outcome with teacher training and girls' clubs have a weak evidence base while the community involvement is found to have promising potential. We, therefore, assume it is likely that the role and involvement of community leaders in monitoring girls' attendance and contributing to alleviating some financial stress that parents and schools face (e.g. supporting the school with purchasing certain consumables, contributing financially, etc.) would be able to solve some economic constraints for some parents, though it is unlikely to create a long-term solution for the students or the schools. However, communities in particularly marginalised areas may not be effective in working with schools on an equal footing given the lower level of education of parents and community members, more impoverished lifestyles, less active ties already existing between community and school, etc. Therefore, we suggest that these extremely marginalised communities are less likely to benefit from the CAP initiative and their girls may still lag behind in attending school.

Teaching quality

Teachers across the three countries were able to manage the classroom effectively. There were minimal disruptions from pupils, and they gave attention and support evenly to both boys and girls. The classroom atmosphere was mostly calm and supportive, although it could be argued that lessons could be improved with less silence. Although rarely observed directly, children often reported the use of corporal punishment, which may account for much of the calm and quiet atmosphere in the classroom. The use of physical violence for discipline seems to be a well-established norm in many schools, and we assume that classroom management benefits from teachers' dominant authority in the classroom. Teachers usually gave equal attention and support to boys and girls. This is in accordance with the teachers' testimonies that they have adopted certain components of gender inclusiveness in the classroom, such as encouraging equal participation in all activities for both girls and boys (class presentations, group leaders, etc.), grouping boys and girls together. There were some differences between treatment and control schools, but these vary by country. Better-qualified teachers achieved better scores in this domain than less-qualified teachers.

Classroom environments do not support teaching and learning of numeracy and literacy. Very few classrooms had students' work displayed on the wall as well as teaching and learning materials that

support literacy and numeracy. However, the classroom environment was generally assessed to be safe and socially inclusive, but there was little evidence of boys being supported more than girls in some classes. In contrast, children report being physically disciplined for coming late to school, making noise, not listening to their teacher's instructions, or not completing their work. Policies on corporal punishment vary across the three countries. For example, in Kenya the Children Act (2001) and Nigeria the Child Act (2003) mandate against the use of corporal punishment, while in Ghana it is permissible (albeit by the head teacher and not the teacher). We suggest, based on the literature, that teachers' 'normalising' punishment can increase the chances of a child becoming physically aggressive toward other children, especially girls, and therefore affect their desire to come to school and ability to do well.

Teaching is very much led from the front of the classroom, and the use of the eight numeracy teaching and learning approaches and strategies that DP-2 numeracy training will focus on are limited at baseline among the teachers observed. Teachers in Kenya and Nigeria were more likely to display enthusiasm for the subject and encourage a can-do attitude relative to Ghana. This was partly expressed through their demeanour, but more often through praise and encouragement. In Ghana, the approaches/strategies selected by teachers to teach the subject or particular lesson were most appropriate, whereas in Kenya and Nigeria the selection of approaches/strategies is not in line with what we would consider optimal. **Different forms of numeracy assessment strategies were employed in all three countries.** In Kenya, supportive questioning and checking pupils' knowledge during the lessons and pupils' mastery at the end of the lesson were all fairly common, occurring in 65–70% of the lessons. In Nigeria and Ghana, supportive questioning and closed- and open-ended questions were the most common assessment methods. Checking pupils' understanding during the lesson and mastery at the end occurred in just under half of the lessons observed. Use of quizzes and other assessment strategies were rare across all three countries. The assessment strategies used in treatment lessons were similar to those used in control lessons. In Kenya, lessons in Nairobi used supportive questioning more often than those in other counties. There is some evidence from Kenya that the assessment strategies used are correlated with teacher characteristics and class size.

Teachers in all three countries reported using the DP video materials, which according to them have helped students visualise what they are teaching better, making the topics relatable, their work more manageable in the classroom, and teaching much more interactive and engaging for the children. However, in the diaries maintained by students only a few children explicitly mentioned watching videos during their lessons. Teachers find the DP videos to be an effective aid to both teaching and learning within the classroom. However, they felt the videos were not tailored to the local context and syllabus in the three countries.

Use of methods to teach foundational literacy skills and comprehension strategies was very limited. Teachers very rarely used any of the 15 literacy teaching and learning approaches that DP-2 literacy training will focus on. The only approach that was used in the majority of the lessons in all three countries was giving pupils opportunities to speak and listen to the teacher and other pupils, largely through front-led question and answer sessions. In contrast, teachers reported, during the qualitative baseline, that DP training has improved lesson delivery and classroom management skills (specifically the use of techniques to keep the children's attention and control noise and loitering). Teachers in Kenya also appreciate the DP training and believe that it has improved the teaching and learning practice. They suggest that the training provided by DP, especially in English, helped them develop their knowledge and confidence in delivering their lessons.

Patterns of teaching and learning approaches were similar in treatment schools to control schools in the three countries. Teaching and learning approaches do not vary significantly depending on teacher characteristics or class size. The most common literacy assessment strategies employed by teachers are

supportive questioning and closed- and open-ended questions, which were used in about 70% of lessons overall. In about half of lessons, teachers made an effort to check pupils' understanding during and at the end of the lesson. There were some small differences between the assessment strategies used in treatment schools and those used in control schools in Kenya and Nigeria. In Kenya teachers in treatment schools were more likely to check for pupil understanding, while in Nigeria teachers in treatment schools were more likely to ask closed- and open-ended questions more frequently.

The quality of teaching is often affected by contextual limitations, such as the shortage of teaching materials, inadequate infrastructure, and overcrowding of classes. We found that Nigeria tends to have more school-based issues such as teacher shortage, teacher turnover, oversized classes, and poor school infrastructure, as well as a generally poorer command of the English language, all of which affect the teaching quality. In Kenya, school infrastructure is not an issue relative to the other two countries, but, as suggested earlier, non-formal schools do not have adequately qualified teachers. Ghana struggles with lack of space at school and lack of reliable electricity. Also, school leadership, teacher motivation, remuneration issues, and teacher absenteeism and lateness all have implications for the quality of teaching delivered, although these issues are not directly targeted by DP-2 and have not been covered in this report.

The DP-2 ToC assumes that improving the quality of education will improve performance and encourage more girls and family to invest in schools. At the baseline level, we have yet to see any evidence in support of this assumption. From the literature discussed earlier, we know that teacher training and educational video can lead to better learning outcomes, but there is no evidence found to support such interventions also improving school attendance. What we observe from our findings is that the quality of teaching varies from country to country but is worse in Nigeria. Some of the teaching practices – e.g. corporal punishment and lack of adequate literacy and numeracy teaching approaches – are more likely to affect the most at-risk groups of the marginalised child population.

Community-based attitudes and behaviour change

Parents and community members in all three countries have favourable views toward girls' education and positive aspirations for both girls and boys to further their education and attain a career. In Kenya and Ghana, a very high portion of parents expressed a desire for their daughters to attain a tertiary-level education relative to parents in Nigeria, who seemed satisfied with their daughters completing secondary education or some form of vocational/technical training. Also, we find that both boys and girls feel that attending and performing well in school is an important part of their lives. In Ghana and Nigeria, both boys and girls had positive views about each other and the importance of education for both. On the contrary, in Kenya we find some biased views among boys toward girls' education. It is worth noting that the qualitative baseline took place in well-performing schools and therefore we are unaware whether or not more marginalised communities would have different views.

While there were positive attitudes toward education on the part of both boys and girls, the barriers to schooling were less related to community attitudes but more intertwined with financial constraints resulting in children stepping into their parents' shoes to make contributions toward their household's well-being. As such, children are responsible for engaging in both paid and unpaid work to support their families – indeed, girls are playing an increasingly important role given the current socioeconomic conditions they are living under. Even though the chore burden for boys was not explored as part of this study, we do find some evidence that boys tend to have responsibilities to help on the farm or engage in income-generating activities to support their families and this does also affect their ability to learn and attend school.

The engagement and involvement of parents or household members in school committees or education group meetings is more pronounced in Ghana relative to Kenya and Nigeria. Also, membership in school-level committees was also higher in Ghana relative to the other two countries, where membership was very minimal. Religious, community, and village leaders/elders are well respected and have strong influences in and around the communities they serve. These individuals seem to have interest in and awareness of the barriers to education within their communities and engage in some capacity with both parents and schools to raise awareness and address some barriers, such as alleviating financial constraints, monitoring attendance, etc. However, the situation could be different in remote and rural areas living in extreme poverty, including those in non-formal settlements. Parents in pastoral communities are also likely to be unable to be involved in community and school committees and therefore be left behind.

The advancement and implementation of CAPs vary by country, with Nigerian communities having more advanced CAPs than their counterparts in Kenya and Ghana. Although we found that the engagement and involvement of parents in school committees or education group meetings is more pronounced in Ghana, Ghanaian CAPs were hardly developed and, moreover, CAP members were not always aware of what was required of them. CAPs in Nigeria are reported to have made some progress in raising awareness among community members about girls' education, making financial support to schools and changing some attitudes (although these achievements are not solely attributable to DP-2). Some Ghanaian CAPs were involved in monitoring children's school attendance, ensuring the set-up of the learning centre, and ensuring that the learning centre had materials and adequate equipment and facilities. In Kenya, CAP members were responsible for ensuring that teachers carried out their teaching responsibilities, that children attended school, and that parents ensured their children go to school. They also helped the school secure the TV and other materials provided to the school. Securing the DP-2 equipment seems to be a specific DP-2 activity that CAPs engage in, while the other ways of supporting schools and working with them overlap with the activities of other community and school committees. The communities visited by the qualitative team seem to have already had reasonably developed community and school collaborations that DP-2 CAPs could build on. However, as we suggested earlier, the situation could be different in extremely marginalised communities and for extremely poor households, who could be excluded from such partnerships.

Life skills

The activities of girls' clubs vary from country to country and, indeed, from school to school. Clubs in Nigeria seem to be the most active of the three countries and mostly engage girls in manually producing products to generate income for their schools. Girls and teachers report being proud of being members of these clubs as well as seeing girls benefiting from their membership and improving their life skills and confidence. We also found that there are other girls' clubs in Nigeria where most girls attend drama clubs and girl scout clubs. In Kenya and Ghana, girls' clubs were more focused on raising awareness and knowledge of girls about personal hygiene and menstruation. These are one of the barriers to girls' attendance, as identified in our study, and therefore meet the girls' everyday needs. However, it is unclear how these clubs select their programmes and decide on activities to engage with, as is the extent to which girls themselves have a say in such a decision. The fact that clubs in Nigeria and Kenya require some financial contribution toward some materials undermines the possible membership of girls who particularly struggle financially and live in extremely poor areas. In some cases, teachers report selecting girls who perform well and are neat, potentially excluding girls who are extremely poor and are likely to not have 'proper' clothing, be late to school due to work and distances to school, and to generally not do well at school. In this way, girls' clubs could be exacerbating the exclusion of girls instead of including

those most in need. However, it should be noted that the practice of asking for financial contributions and selecting certain types of girls goes against the advice given to schools by DP-2.

Recommendations

Recommendations against observed barriers to education

DP-2 should revisit its ToC with specific attention to better articulating the strength of evidence behind each step in the causal pathways, and particularly the implicit assumptions that underpin these causal pathways. The current version of the ToC does not explicitly address how external factors may undermine the achievement of expected outcomes, and while these may be outside the control of DP-2 they should be acknowledged to encourage focus for project activities, as well as to encourage projects and communities to think creatively to overcome major barriers that are currently conceived of as external to the project.

DP-2 should demonstrate a more nuanced understanding of the different profiles of marginalised girls. Currently, DP-2 assumes that all girls served by the project are marginalised, which suggests a homogenous group facing a similar set of barriers. This ignores the heterogeneity observed in this report among girls exposed to DP-2 who face multiple dimensions of marginalisation, which, when overlapping, become much harder to address. Distinguishing between marginalised and extremely marginalised girls will allow the programme to identify those most in need of support through project activities.

The importance of updating the ToC and providing more nuance in the definition of marginalisation is demonstrated through extreme poverty being an important external factor affecting attendance, transition, and learning. While some CAPs seek to address the barriers to girls' education associated with extreme poverty DP-2, in its training of CAP participants, could pay specific attention to supporting communities to overcome this barrier (and other major barriers not currently specifically addressed by the project). In addition, some of the project activities that require financial contributions from families and communities (such as expenses for girls' clubs or maintenance fees for DP-2 equipment) are in conflict with the approach as designed by DP-2. In addition to existing school-related expenses, the project related expenses may exclude the most marginalised from benefiting from DP-2 activities.

DP-2 could consider collaborating with other actors in human development sectors and government agencies to provide better coordinated support to extremely marginalised girls (and their communities and households). These efforts could be more successful in addressing multiple barriers through more direct and targeted interventions. This could include targeting the same girls for providing meals at school, supporting girls with sanitary items, providing cash to attend clubs, buying uniforms, etc. More research into the best way of helping poor families will be useful since the links between some interventions such as removing school fees and better learning are not straightforward. **Moreover, better knowledge sharing with other actors in the sector – in terms of what works, how, in which context, and for whom – would be useful, especially in regard to teacher training.** All three countries have had a number of teacher training projects in the past but teachers, especially in Nigeria, do not demonstrate adequate teaching practices. Such collective learning can help identify what is going wrong and what DP-2 can learn from others. While DP-2 country teams may have limited capacity to engage in this type of activity, DFID country offices could certainly support these efforts by making connections with organisations working to address the relevant barriers.

Recommendations against outcomes

DP-2 should clearly define what it means by self-efficacy, aligned to the work it is undertaking via the My Better World (MBW) Curriculum. A clear definition of this would support a concerted effort by DP-2 country teams in achieving progress against the self-efficacy indicator. Currently, the DP-2 definition is broad and open to interpretation, which does not support focused efforts to make progress against this outcome.

The GEC-T definition of transition does not distinguish between progression in primary grades and transition to JSS. However, we have identified barriers that affect progression and transition differently. It may be helpful for GEC-T to revert to an education norm definition of progression and transition that would encourage a more nuanced understanding of the different barriers that threaten progress at specific points of a girl's education. This will be particularly important as girls begin to transition into JSS in Ghana and Nigeria.

Literacy learning outcomes in Nigeria are of serious concern. This is in large part outside of DP-2's control, given that teachers in Nigeria often demonstrate a poor command of the English language. DP-2 and GEC-T should, however, address this by reconsidering whether current expectations around improvements in literacy against English are realistic given this context, and whether literacy training in Nigeria should instead focus on much more fundamental elements of understanding.

The sustainability of certain activities and in particular the teacher training remains reliant on key individuals, especially resource teachers and local MoE staff. Given the high rates of teacher turnover and the potential for local MoE staff to transfer or move on themselves this remains a threat to the sustainability of DP-2 activities. We recommend that DP-2 consider specific engagement with the MoE to support the regularisation of key DP-2 activities in education sector plans and budgeting. We also recommend that DFID, given its access at these levels, provide support to DP-2 (and indeed other GEC-T projects) in this regard.

Recommendations against intermediate outcomes

Increased support to attendance monitoring. Attendance is a key intermediate outcome for DP-2. Given the observed discrepancies in attendance-keeping practice (particularly in Nigeria and to some extent in Kenya), we would strongly encourage the DLA country teams to work closely with schools through their monitoring visits to encourage and monitor attendance-keeping practices.

The literature review suggests that community-based monitoring has the potential to improve attendance as well as school quality. DP-2 could consider supporting community-based monitoring of DP-2 schools, through existing CAP structures. The programme could, for example, provide school scorecards to be published publicly that rate DP-2 schools against their relative performance among all DP-2 schools using indicators crucial to the success of DP-2 activities. This is potentially a low-cost activity that would make use of DP-2's monitoring and evaluation (M&E) system, but could greatly facilitate conversations between schools and the communities they serve (e.g. by providing the attendance rates of the school relative to all DP-2 schools, or indeed their performance on attendance keeping).

We find that CAP members are generally influential members of the community. While we find no evidence that this is the case at baseline, there is a danger that this might encourage 'elite capture' in the sense that the only barriers to education that are considered are those that might affect the children of CAP members. DP-2 could consider encouraging a more diverse membership on CAPs (e.g. by having some membership positions drawn by a random lottery of parents), which would at least encourage voices that might not otherwise be heard.

Given evidence that teachers perform poorly in assessing student performance, DP-2 should support teachers to improve their understanding of the importance of and their ability to: (i) gather

information about what all pupils understand and are able to do; (ii) consider what that information might mean; and (iii) alter classroom practice accordingly. This might include an exploration of the desired thinking process behind assessment for learning with teachers, helping them better understand what they know about the learning attainment of pupils, how they know it, and how that knowledge should alter their practice. However, in certain circumstances, and in particular for literacy teachers in Nigeria, it may be prudent to first focus on more foundational skills given the very low performance in certain domains.

We find that the teaching methods DP-2 intends to focus on are only used rarely in classrooms at present, in particular the desired move away from front-led teaching. Teachers' practice within classrooms is driven not only by their knowledge and skills but also by incentive structures and the culture they work within. We, therefore, recommend working as intensively with schools as possible and working with teachers to better understand barriers to implementing new approaches and how they can be overcome.

1. Background to the project

The DP-2 is a multi-country project (Kenya, Ghana, and Nigeria) that aims to increase girls' self-esteem, aspirations, and academic and life skills, which, combined with improved teaching and an increasingly enabling environment, will facilitate girls' learning, completion of primary and secondary school cycles, and pursuit of their education and life goals. It does this through the introduction and use of sustainable technology, quality educational content and TPD, a life skills print and visual curriculum for girls' clubs, and fostering enabling environments at the community level and beyond. The first phase of this project (referred to as DP-1) ran from 2014 to 2017. The second phase (referred to as DP-2) builds on the success and impact of DP-1 and will span 2017 to 2020 across the three countries. DP-2 is currently working with the same schools that were part of DP-1 and new additional secondary schools and JSS. The focus of this evaluation and report will be on the second phase of the project implementation, i.e. DP-2.

1.1 Project context

DP-2 operates in a range of marginalised areas with varying contexts across the three countries and the project has factored these differences into the design and implementation approach in each country.⁴ Although there are contextual differences between the countries, some commonalities are notable; these include governments' education policies and priorities, educational outcomes, and persistent barriers to marginalised girls' learning and transition. For instance, primary education is free and compulsory for all school-aged children, across the three countries, and girls tend to face significant economic and social barriers to learning and transition, especially as they reach adolescence toward the end of the primary cycle and look to transition to JSS. Economic barriers relating to poverty are especially pronounced in the most marginalised communities. Below we briefly discuss the context in each country.

Nigeria

In Nigeria, 'basic education' includes six years of primary (children aged 6–11 years old) and three years of JSS education (ages 12 – 14). The Free Universal Basic Education Act of 2004 makes provisions for free and compulsory education for all school-aged children for nine full academic years of basic education.⁵

DP-2 operates in 15 out of the 44 local government administrations (LGAs) in Kano State (see Figure 1). In Kano, many rural schools lack adequate school facilities and resources (e.g. toilets, classrooms, and libraries) relative to urban schools. The delivery of the project is thus affected by poor infrastructure and lack of access to services within the target areas. Schools are also typically understaffed and classrooms overcrowded, thereby affecting the quality of teaching and education. The LOI also plays a role; there is a lack of available local-language resources and levelled English readers to support learning and teaching. Although primary schooling is free in Nigeria, schools sometimes charge fees for exams, for parent–teacher associations (PTAs), or toward the cost of uniforms. There are, therefore, indirect schooling costs even when the direct costs of schooling are presumably minimal or even free, which places poorer pupils at a disadvantage. Pupils' nutritional status is also likely to affect their learning in school – in northern Nigeria, many pupils report coming to school hungry or with minimal amounts of pocket money to buy food during the day.⁶ There is no specific policy on pregnant girls staying in school or young mothers

⁴ Discovery Learning Alliance Proposal, 2016

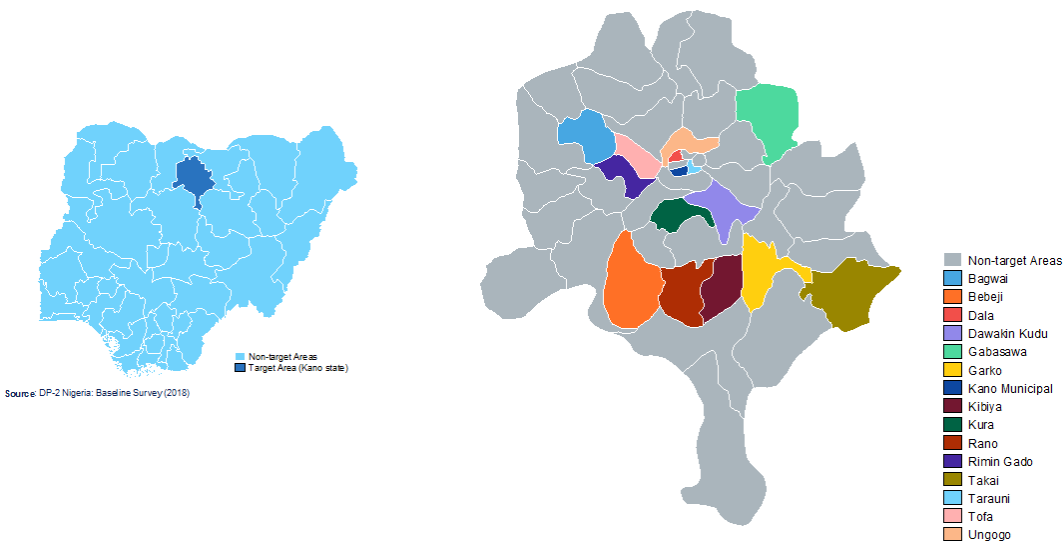
⁵ International Labour Organization. Accessed on 7 June 2018 from

<http://nigeria-education.org/literature/compulsory-free-universal-basic-education-act-2004>

⁶ De, S., Pettersson, G., Morris, R., and Cameron, S. (2016). *Teacher Development Programme (TDP) Impact Evaluation of Output 1: In-Service Training, Final Baseline Technical Report, Volume I Results and Discussions*. EDOREN, Abuja.

returning to school; both situations are allowed and centrally encouraged, but there are many cultural and economic barriers to this happening for most girls. There are also concerns about safety in reaching schools, which results in parents opting for their girl children dropping out of school.

Figure 1: DP-2 project areas in Nigeria – Kano State



Kenya

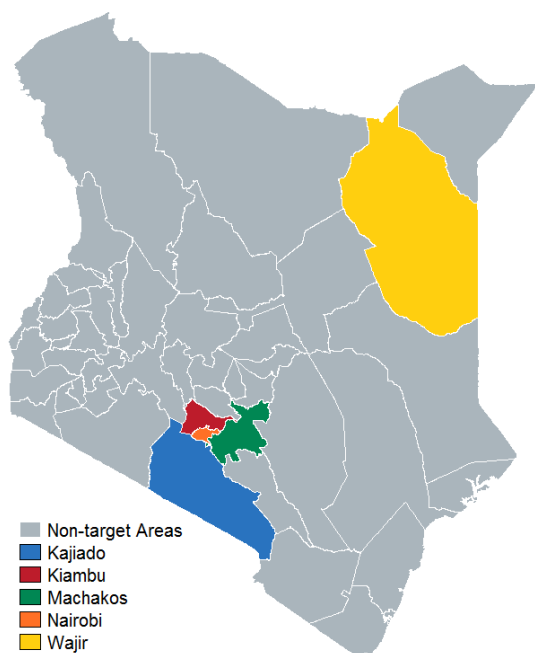
Improving the state of education is a priority for the Government of Kenya. The Free Basic Education (FBE) Policy of 2003 mandates compulsory free basic education for every child. In Kenya's education system, lower primary is three years (ages 6–8) followed by five years of upper primary (ages 9 – 13) and four years of secondary (ages 14–17, with the first two considered JSS). The Ministry of Education, Science and Technology encourages mother-tongue instruction in the first three years of primary school, although students study English as a second language and numeracy is taught in English. With the exception of Kiswahili, which is a subject in its own right, subjects in the upper primary are taught in English.

DP-2 operates in five counties in Kenya: Nairobi, Machakos, Kajiado, Kiambu, and Wajir (see Figure 2). Poverty rates across the country reveal pronounced geographic inequalities: for example, 85% of children live in poverty in Turkana County (northern Kenya) compared to 7% in Nairobi, the capital.⁷ In arid and semi-arid regions such as Wajir and Kajiado, the exclusion of girls from education is common and often influenced by the nomadic and pastoralist practices in the region, which see the constant movement of communities in search of pastures. A consequence of this is non-attendance, particularly among girls who take on the responsibility of caring for younger siblings as well as household chores. Although a tuition subsidy is provided, there remain additional expenses such as uniforms, school projects, and fees for extracurricular activities. Cultural practices including child marriage and female genital mutilation (FGM) also continue to affect school attendance among girls. Additionally, stigma around teenage pregnancy, as

⁷ UNICEF (2017) *Annual Report – Kenya*. UNICEF Kenya. Accessed from www.unicef.org/about/annualreport/files/Kenya_2017_COAR.pdf on 16 July 2018

well as the lack of a social support system in some communities, contribute to school dropout, despite a Government of Kenya policy that stipulates that pregnant girls be allowed to return to school.

Figure 2: DP-2 project areas in Kenya



Source: DP-2 Kenya: Baseline Survey (2018)

Ghana

The Government of Ghana has taken measures to attain its education goals, including the adoption of the Education Strategic Plan, which is a policy covering the period 2010 to 2020,⁸ the Global Partnership on Education and Capitation Grant (School Fee Abolition), and other initiatives. Basic education includes two years of kindergarten, six years of primary (ages 6–11) and three years of junior high school (ages 12–14). The entire basic education cycle is free and compulsory. There have been very positive trends in student enrolment, retention, and transition between the school years. The 2016/17 annual education sector performance review highlighted that Ghana continues to maintain high rates of participation at all levels of basic education. Gross enrolment ratios in kindergartens and primary schools have exceeded 100% for the past several years.⁹ While there have been strides in improving access and quality of education across the country, however, marginalised regions, particularly in the north, continue to lag behind in progress. The three northern regions (Northern, Upper East, and Upper West) are identified as the poorest in Ghana, with the lowest educational attainment levels and highest levels of illiteracy. DP-2 in Ghana operates in nine out of the 26 districts in the Northern region (see Figure 3). The region has the lowest level of school attendance of children of primary school age at just 59.4% of children. It also has the lowest female literacy rate in the country at 44.3% of young women aged 15–24 years (national

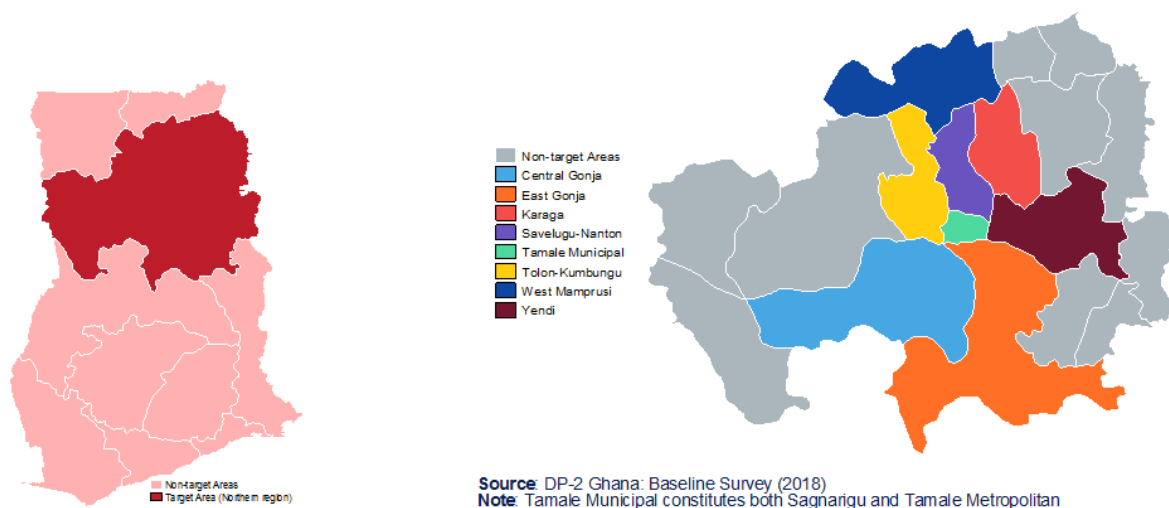
⁸ Government of Ghana (2010) *Education Strategic Plan 2010 to 2020. Volume 1: Policies, strategies, delivery, finance. Volume 2: Strategies and work programme*. Accessed on 18 June 2018 at

<http://planipolis.iiep.unesco.org/en/2012/education-strategic-plan-2010-2020-volume-1-policies-strategies-delivery-finance-volume-2>

⁹ UNICEF (2017) *Annual Report – Ghana*. Accessed on 18 June 2018 at www.unicef.org/about/annualreport/files/Ghana_2017_COAR.PDF

average 61.4%).¹⁰ Gender disparities are also apparent, with girls having worse educational outcomes compared to boys. One of the efforts toward improving girls' educational outcomes is the government's pledge to end teenage pregnancy and endorsement of the National Strategic Framework on Ending Child Marriage in Ghana 2017–2026. Teenage pregnancy is both a cause and consequence of child marriage. On average, one out of five girls in Ghana is married before their 18th birthday and for girls living in the three northern regions this number increases to one out of three girls (34%).¹¹ Girls who get married are very often forced to drop out of school as they are expected to focus on being wives and mothers. Without an education, girls in these regions have limited options for livelihoods, further increasing their vulnerability in the marriages.

Figure 3: DP-2 project areas in Ghana – Northern region¹²



1.2 Project ToC and assumptions

In this section, we present the DP-2 ToC as outlined in the project documents. We assess the plausibility of the ToC by testing the causal link assumptions and contextual assumptions of barriers to girls' education using the existing evidence and examining whether the project interventions designed to overcome the stated barriers would lead to the achievement of the project impact and intermediate outcomes.

The underlying theory behind DP-2 is that, in contexts where marginalised girls face various socioeconomic and cultural barriers (e.g. early or forced marriage, affordability of school, and perceived

¹⁰ Government of Ghana – Department of Children (Ministry of Gender, Children and Social Protection), supported by UNICEF (2014) *Child Protection Baseline Research Report* Accra, Ghana. . Accessed on 18 June 2018 from www.unicef.org/ghana/P1417_unicef_ghana_NORTHERN_WEB.pdf

¹¹ Government of Ghana – Department of Children (Ministry of Gender, Children and Social Protection), supported by UNICEF (2016) *National Strategic Framework on Ending Child Marriage in Ghana 2017–2026*. Accessed on 18 June 2018 from www.girlsnotbrides.org/wp-content/uploads/2017/05/2017-2026-National-Strategic-Framework-on-ECM-in-Ghana.pdf

¹² East Gonja and West Mamprusi are now municipalities and Savelugu is now a municipality with Nanton carved out as a district.

value of education, specifically girls' education), and education facilities and the quality of education are lacking, girls' abilities to enrol, regularly attend, learn, and continue their schooling are greatly constrained. The DP-2 design takes a holistic approach of investing in activities that aim to improve the quality of education, self-efficacy of girls, and engagement of community members in schooling. It does this through the introduction and use of sustainable technology, quality educational content and TPD, life skills programming for clubs, and fostering more enabling environments at the school and community level to successfully address the barriers and achieve improvements in girls' attendance, learning (literacy, numeracy, and self-efficacy), and transition through primary and on to secondary school (see Figure 4 for the detailed DP-2 ToC).

Figure 4: DP-2 ToC

The Discovery Project Theory of Change				Assumptions
Outcomes	Learning	Transition	Sustainability	
				With broad teacher, family, community and government support, girls' learning will improve and they will be empowered to continue their education and transition up
Intermediate Outcomes	<ol style="list-style-type: none"> 1. Improved attendance; 2. Improved quality of teaching and learning; 3. Increased girls' life skills; 4. Improved boy, family and community attitudes and behaviours. 			Girls will be more engaged in school and inspired as the perceived value of education rises and the enabling environment in the family, community and classroom improves. Visual learning motivates teachers, shows real world application and improves comprehension.
Outputs	<ol style="list-style-type: none"> 1. Teachers gain skills, resources and confidence; 2. Communities take action to advance girls' education and create an enabling environment; 3. Girls gain life skills training, mentoring support and access to resources; 4. School and government partners take the lead on integration, monitoring, and follow-up support. 			By providing training and resources to teachers, mentors and school community leaders, exposing communities to gender equality and education for all messaging through outreach and mobilising community action in response, project participants and stakeholders will have the intentions and tools to achieve the stated outputs.
Activities	<ol style="list-style-type: none"> 1. Engage school and community leaders 2. Train and coach teachers with MOE partners 3. Install A/V technology and video content in JS schools; 4. Create new life skills content (with Camfed) 5. Support girls and boys club mentors with training and links to new school and community resources 6. Support community action planning and execution, targeting attendance, transition and learning barriers 			Improving the quality of education (better gender responsive teaching and multi-media resources) will improve performance and encourage more girls and family to invest in school. By educating and empowering girls, their families and the community around them, the value of girls education will be clear and prioritised. In turn, decision makers will support girls' learning and transition to higher level for education.
Barriers	<p>Demand: Socio-cultural norms, costs, the perceived value is not well established – If investments in girls education 'end up in someone else's kitchen'; it is not a good investment of limited resources, limited self-advocacy.</p> <p>Supply: need to improve quality of education through teacher training, etc. to ensure the actual value of education- why go if learning is limited?</p>			

Source: Discovery Learning Alliance Full Proposal, 2017

As shown in Figure 4, the ToC sets out a number of assumptions at various levels. For our analysis, we break down the assumptions and identify three main causal assumptions for desired learning and transition outcomes (sustainability is addressed separately). These are:

- i. Teacher training¹³ and educational media, for both in-school and after-school remedial classes, lead to better school attendance and improved teaching and learning outcomes;

¹³ DP teacher training focuses on student-centred and gender-responsive pedagogy, use of educational media in the classroom, and most recently as part of DP-2 literacy and numeracy training.

- ii. Girls' clubs lead to girls having improved self-confidence, life skills, and educational and life aspirations, i.e. self-efficacy, which in turn improve their school attendance, retention, and learning outcomes; and
- iii. Community involvement in action planning to identify and address barriers to girls' learning and transition leads to changed attitudes and beliefs on the part of community members and concrete actions in support of girls' education, which in turn increase girls' abilities to enrol, attend, learn, and continue with their schooling.

It is worth mentioning that, although these assumptions are presented as a linear process, these pathways are of course far from being so and are affected by a range of factors that hinder or promote the assumed results. Furthermore, some elements of these pathways can materialise without the DP-2. Therefore, throughout our impact evaluation we will examine the broader context that DP-2 functions under in order to understand its contribution given the contextual peculiarities of each country. In this section, we investigate each of these causal assumptions and explore the plausibility of the theory using the broader literature.

i. Teacher training, educational media, and improved results

The existing body of literature shows that, by international standards, average teacher academic qualifications and levels of training in Eastern and Southern Africa are low and that many teachers are unqualified or underqualified¹⁴. The 2007 data collected by the Southern and Eastern Africa Consortium for Monitoring Educational Quality suggest that teachers with a JSS qualification or lower teach a significant percentage of students in the region¹⁵. Even teachers with both in-service and pre-service training were judged to be of poor quality¹⁶. The project assumes that students (girls in particular) learn better when they are taught by effective teachers and that teachers become more skilled and knowledgeable through training. A rigorous literature review in 2013¹⁷ found that evidence on the impact of teacher training was only partially captured in most studies and therefore highlighted a need for more holistic and robust evaluations of teacher education initiatives. The available literature, in turn, suggests strong evidence claiming that training teachers formally in subject content, pedagogy, and management, as well as about gender equality and gender-sensitive pedagogy, and informally to develop attitudes of inclusion and tolerance, plays a significant role in reducing girls' dropout.¹⁸ There is promising evidence that both formal and informal teacher training in gender equality and pedagogy improve girls' learning outcomes.¹⁹ In general, according to Snilstveit *et al.* (2015),²⁰ programmes using structured pedagogy²¹

¹⁴ Hardman, F. *et al.* 'Developing a systemic approach to teacher education in sub-Saharan Africa: emerging lessons from Kenya, Tanzania and Uganda' *Compare: A Journal of Comparative and International Education*, 41:5, 669-683, DOI: [10.1080/03057925.2011.581014](https://doi.org/10.1080/03057925.2011.581014)

¹⁵ *Ibid*

¹⁶ *Ibid*

¹⁷ Westbrook, J. *et al.* (2013) 'Pedagogy, Curriculum, Teaching Practices and Teacher Education in Developing Countries. Final Report. Education Rigorous Literature Review'. Department for International Development, London.

¹⁸ Unterhalter, E. *et al.* (2014) 'Interventions to enhance girls' education and gender equality. Education Rigorous Literature Review'. Department for International Development, London.

¹⁹ *Ibid*.

²⁰ Snilstveit, B. *et al.* (2016) 'The impact of education programmes on learning and school participation in low- and middle-income countries: a systematic review summary report', *3ie Systematic Review Summary 7*. International Initiative for Impact Evaluation (3ie), London.

²¹ Structured pedagogy programmes seek to address several barriers to learning directly and usually combine the provision of both 'hardware' and 'software'.

to change the classroom environment have the largest and most consistent positive effects on learning of any programme included in their review.

Although teacher training is useful, past studies have suggested that a range of contextual, cultural, and material constraints prevented teachers from implementing their obtained skills and knowledge in the desired ways. Among these factors are school characteristics,²² misalignment of initial teacher training with the school curriculum, limited resources and large class sizes, curriculum and assessment, and poor communication with the community and policymakers.²³ The effectiveness of training can also be affected by a high turnover of teachers and teacher absence as well as low teacher incentives.²⁴

Regarding evidence on the effect of remedial classes (structured programmes that are designed to help students who are lagging behind and who need extra attention to improve their performance in the classroom), the evidence is limited but is promising for improving learning outcomes.²⁵ Remedial classes are particularly effective when the intervention is adaptive to the student's learning level, which is also true about the use of technology-assisted learning.²⁶ The latter is reported to be a promising intervention for improving learning. See Box 1 for details on the DP Accelerated Learning Programme.

Box 1: Accelerated Learning Programme Intervention

The **Accelerated Learning Programme** intervention was designed relatively late in the DP-2 process and was the direct result of guidance from the Fund Manager. The Fund Manager expressed concern that the existing project as proposed was not positioned well enough to produce learning gains in literacy and numeracy. DP agreed that more could be done and designed an approach that would focus on those girls in most need of support. Based on the previous evaluation for DP-1 (and confirmed in the DP-2 baseline), significant numbers of girls were well behind where they would be expected to be in literacy and numeracy given their school year. The biggest concern based on the evaluation was on fundamental skills such as number and letter identification and other similar basic skills. As such a programme was designed to train tutors in project schools (the vast majority of these proved to be existing teachers in schools, but there are a small number of community volunteers in Kenya) to conduct remedial classes for those girls and boys who were performing far behind what would be expected. Students in need were identified through a combination of remedial testing and using existing test scores. Tutors would be compensated for their extra time and given a brief training in using DP materials to promote literacy and numeracy skills.

Due to the large number of active schools and limited resources of DP, the decision was made to separate the Accelerated Learning Programme in two phases, with a third of schools to engage in the programme in the first phase and the remainder to engage in the second year using lessons learned from the first phase. By design, Accelerated Learning Programme schools were selected to make sure that as much overlap between the evaluation and phase one would be present as possible (all intervention schools are part of phase one of the Accelerated Learning Programme). In Kenya, identification of remedial students for participation started in June 2018, and upon the beginning of

²² Bennell, P and K. Akyeampong (2007) 'Teacher Motivation in Sub-Saharan Africa and South Asia', *Educational Papers*.

Department for International Development, London; Robinson, V. Lloyd, C. and Rowe, K. (2008) The Impact of Leadership on Student Outcomes: An Analysis of the Differential Effects of Leadership Types, *Educational Administration Quarterly*, 44: 635-674.

²³ Westbrook *et al.* (2013).

²⁴ Rogers, F.H and Vegas, E. (2009) 'No More Cutting Class? Reducing Teacher Absence and Providing Incentives for Performance'. *World Bank Policy Research Working Paper 4748*. World Bank, Washington DC.

²⁵ Snilstveit *et al.* (2015).

²⁶ Conn, K. (2014) 'Identifying Effective Education Interventions in Sub-Saharan Africa: A meta-analysis of rigorous impact evaluations'. PhD thesis. Columbia University.

the school year for Ghana and Nigeria in August 2018. Concurrent with this exercise was the training of remedial tutors and remedial classes were active in all countries by late September 2018.

While the remedial classes are technically open to any students in need, the project emphasised supporting girls in primary 4-6 in all schools. The size of the remedial classes does vary by country. Kenya schools have smaller groups depending on the size of the school, while larger groups are present in Ghana and Nigeria. In Nigeria, the need in some schools was deemed so great, that the remedial classes within larger schools were broken up in two phases to reach the large number of girls and boys in need of support.

The causal link between the teacher training and educational media with school attendance is not straightforward. In particular, according to the systematic review of development interventions, the intervention that works most effectively in most contexts in terms of improving attendance is cash transfers. However, there is promising evidence that new schools and infrastructure as well as community-based monitoring are shown to have positive impacts on attendance, while the effect of teacher training and remedial classes on attendance is unknown.²⁷ Also, among the effective interventions for school attendance is school feeding, which is suggested to have a positive impact on enrolment, attendance, and dropout rates and small, but significant, effects on learning outcomes.²⁸

We can summarise that the causal assumption that teacher training and educational media, for both in-school and after-school remedial classes, leads to better school attendance and improved teaching and learning outcomes is largely supported by the literature given they are tailored to the context (e.g. learner needs, barriers to education, etc.). The gap is around the effect of teacher training on attendance, though we found that teacher training plays a significant role in reducing dropouts. There are other interventions that are more effective in tackling attendance, which include school feeding programme and cash transfers.

ii. **Girls' clubs and improved life skills, self-esteem/self-efficacy, and educational and life aspirations**

There is a strong evidence base in support of the claim that learning outside the classroom through formal and informal extracurricular activities, including after-school clubs, has a positive effect on girls' learning outcomes.²⁹ The literature shows that extracurricular life skills clubs – whether targeted at girls or boys – can play a similar role to mentors in helping girls develop the confidence and attitudes that can enable them to succeed at school and can also provide peer-support networks for study³⁰ and improve their exam results. Marcus and Page found significant positive differences in exam performance in a controlled experiment, which they attributed to girls' increased commitment to studying following their involvement with the project.³¹ In the Transforming Education for Girls in Nigeria and Tanzania (TEGINT) programme, the review found a strong positive correlation between membership of a girls' club and having a better class position in end-of-term examinations³². In evaluating the TEGINT programme in Nigeria, Para-Mallam (2012)³³ found that 32% of girls in clubs reported that the clubs helped them with

²⁷ Ibid.

²⁸ Krishnaratne, S., White, H. and Carpenter, E. (2013) 'Quality education for all children? What works in education in developing countries', *Working Paper 20. 3ie*, New Delhi.

²⁹ Unterhalter *et al.* (2014).

³⁰ Marcus, R. & Page, E., 2016. *Evidence Review: Girls' Learning and Empowerment- the role of school environments*, s.l.: ODI.

³¹ For example, in term three of 2014, over 10 times as many Wezesha girls scored above-average marks ranging from 300 to 399 compared to the control group (23.6% and 2.6% respectively).

³² Ibid.

³³ Para- Mallam, F. (2012) '*Transforming Education for Girls in Nigeria: Endline Research Summary report*'. London: ActionAid

reading and writing skills, 48% felt they helped them learn about gender, girls' rights, HIV and violence, and 41% felt the clubs helped them have fun³⁴.

The relevant literature suggests strong evidence that learning outside the classroom through formal and informal extracurricular activities (e.g. after-school clubs and girls' clubs) has a positive effect on empowerment in general.³⁵ In Ethiopia, the Aflatoun programme which provides financial education to children in schools and youth clubs found a positive impact on self-efficacy and self-confidence among girls³⁶ A cross-country analysis of a programme designed to reduce violence against girls in schools in Kenya, Ghana, and Mozambique found that belonging to a girls' club was associated with increased assertiveness and confidence and had an increased commitment to education³⁷ Jones *et al.* (2015b)³⁸ found that the Amhara Development Association's girls' club initiative in Ethiopia had strong effects in keeping girls in school and building their self-esteem and confidence, and had helped some families prioritise girls' education over early marriage. Similarly, the Overseas Development Institute in 2015 used qualitative research to examine the impact of school-based girls' clubs in Ethiopia and Vietnam and found that neither of the two country studies made direct links to academic performance but both reported effects on girls' self-confidence and negotiating skills³⁹. Although Marcus and Page found no quantitative evidence that school-based girls' clubs improved girls' learning outcomes, there was a consensus in the qualitative studies that girls' clubs helped girls develop 'soft' skills such as becoming more confident to speak out on issues affecting themselves or others, as well as to participate actively in class⁴⁰.

We summarise that the literature largely supports the assumption that girls' clubs lead to improved girls' self-confidence, life skills, and educational and life aspirations, which in turn improve their school attendance, retention, and learning outcomes. We find strong evidence that clubs contribute to girls' better learning outcomes and self-esteem but they also positively affect their empowerment more generally. There is also evidence that clubs are promising in encouraging girls to continue their education. However, what is missing is that clubs are effective in improving attendance and no literature was found on self-efficacy.

iii. Community involvement and improved girls' education

The theory underlying DP-2 is that schools do not exist in isolation and students' performances at school are affected by a range of factors that operate outside the school. In particular, the idea is that girls' education is not only a matter of school and teaching but is also affected by community attitudes and beliefs. Therefore, engaging and supporting the community to mobilise its collective resources can in turn address barriers to girls' education. The role of the community in the demand, supply, and governance aspects of the school system is especially important in contexts where culture and traditions impact girls' ability to enrol, learn, and complete schooling. To improve girls' education, according to Parsitau, it becomes important to engage with elders, community and spiritual leaders, elected leaders, youth, and

³⁴ Marcus, R. & Page, E., 2016. *Evidence Review: Girls' Learning and Empowerment- the role of school environments*, s.l.: ODI.

³⁵ Unterhalter *et al.* (2014).

³⁶ Ambelu, W. (2015) '*An Evaluation of Child Social and Financial Education in Ethiopia, implemented by World Learning*'. The Netherlands: Aflatoun International.

³⁷ Parkes, J. and Heslop, J. (2013) '*Stop Violence Against Girls in Schools. A Cross Country Analysis of Change in Ghana, Kenya and Mozambique*'. London: ActionAid.

³⁸ Jones, N., Tefera, B., Presler-Marshall, E., Gupta, T., Emirie, G., Gebre, B. and Berhanu, K. (2015b) '*Now I can propose ideas that can solve any problem: The Role of Community Awareness Interventions in Tackling Child Marriage in Ethiopia*'. London: Overseas Development Institute

³⁹ Marcus, R. & Page, E., 2016. *Evidence Review: Girls' Learning and Empowerment- the role of school environments*, s.l.: ODI.

⁴⁰ Ibid.

warriors who are the custodians of tradition and culture, the primary decision makers and wield power, influence, and authority over girls' education⁴¹

Evidence on community engagement in education is mixed. There are different types of school interventions with community engagement, which include community-based monitoring interventions, school-based management interventions, and public–private partnerships. Micro-level community studies revealed how in some cases community management systems were upholding the interests of dominant groups.⁴² Moreover, the uneven socioeconomic and educational backgrounds of people in marginalised communities could suggest that community participation and its contribution to education improvement in those contexts can hardly be assumed.⁴³ However, in Tamil Nadu, participation by women's self-help groups played an important role in supporting improvements for girls. The involvement of women in school governance and community mobilisation has been documented in a few studies, linked with girls' attainment. Unterhalter and Heslop (2012)⁴⁴, assessing material from the TEGINT baseline and endline studies, showed that a greater presence of women on SMCs and greater activity by school governance structures in relation to gender equality and social inclusion was associated with a larger proportion of girls confident to report incidents of gender-based violence. Beaman *et al.* (2012)⁴⁵ established that women in leadership positions at the village level in India have a positive impact on girls' schooling and learning outcomes as assessed by a reading test.

Evidence suggests that public–private partnerships (low-cost private schools) and community-based monitoring may improve school participation outcomes in some contexts, with community-based monitoring also improving learning in some contexts.⁴⁶ The results for school-based management are less encouraging, with small overall effects and zero or small negative effects in some cases. The same source claims that community-based monitoring programmes are an exception in the way that they improve both school participation and learning outcomes, while the majority of interventions only do either one of those but not both.⁴⁷

We did not find any literature on any intervention with a specific type of community engagement similar to DP-2. Based on our findings, we can summarise that community involvement with greater involvement of female figures has the potential to improve girls' education while community-based monitoring programmes can improve both school participation and learning outcomes in general.

Summary of evidence against the three main causal assumptions

Figure 5 summarises the evidence base in relation to the main three causal assumptions underpinning the DP-2 ToC. As shown, the causal links between the teacher training and girls' reduced dropouts and girls' clubs and improvements in girls' soft skills and learning outcomes are supported with strong

⁴¹ Parsitau, D. S., 2017a. *How girls' education intersects with Maasai culture in Kenya*. [Online]

Available at: <https://www.brookings.edu/blog/education-plus-development/2017/07/25/how-girls-education-intersects-with-maasai-culture-in-kenya/>

[Accessed 30 April 2018].

⁴² Hildyard, N., Hedge, P., Wolverkamp, P. and Reddy, S. (2001) 'Pluralism, participation and power: Joint forest management in India'. In B. Cooke and U. Kothari (eds.) *Participation: The new tyranny?* Zed Books, London.

⁴³ Bray, M. (2000) 'Community partnerships in education: Dimensions, variations and implications', *Education for All 2000 assessment thematic studies*. UNESCO, Paris.

⁴⁴ Parsitau, D. S., 2017a. *How girls' education intersects with Maasai culture in Kenya*. [Online]

Available at: <https://www.brookings.edu/blog/education-plus-development/2017/07/25/how-girls-education-intersects-with-maasai-culture-in-kenya/>

[Accessed 30 April 2018].

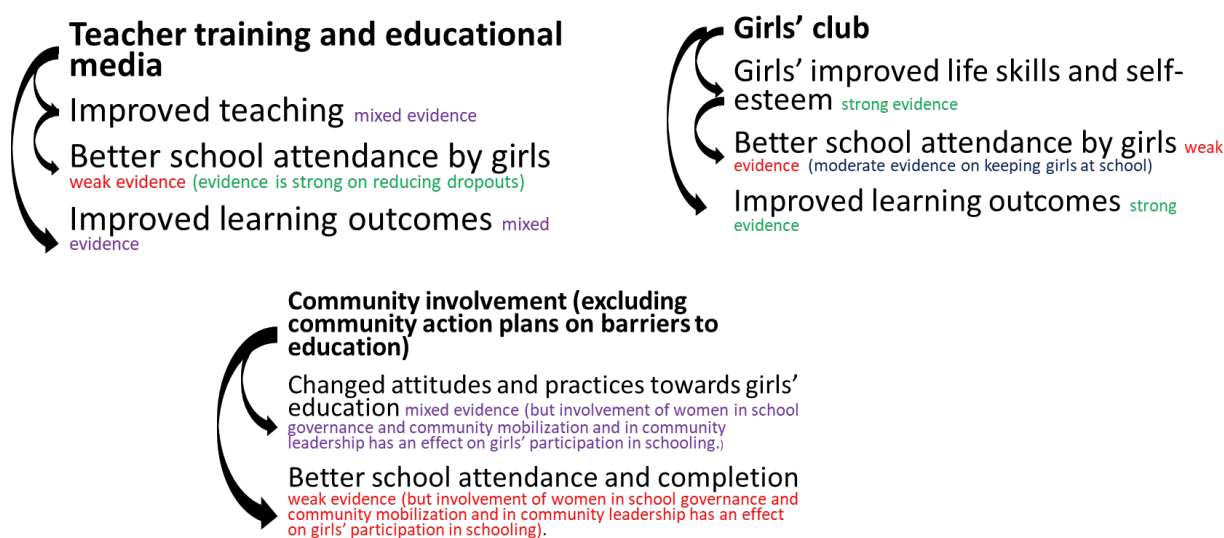
⁴⁵ L Beaman, E Duflo, R Pande & P Topalova (2012) Female leadership raises aspirations and educational attainment for girls: a policy experiment in India. *Science* 335:582–586

⁴⁶ Snilstveit *et al.* (2015).

⁴⁷ *Ibid.*

evidence. However, these causal links may not hold true given differences in the varying context under which DP-2 operates. Evidence supporting the project assumption that teacher training leads to improved teaching and learning outcomes is rather mixed, as is the suggestion that community involvement in girls' education leads to changes in attitudes and practices toward girls' education. Girls' clubs' effect on improving girls' school attendance and remedial classes improving learning outcomes are promisingly positive, but the evidence is moderate, while community engagement in girls' education leading to girls' better school attendance and completion is under-researched. Attendance as an outcome of teacher training and girls' clubs is not suggested in the findings, although community-based activities could be argued to be effective in dealing with it.

Figure 5: Summary of the evidence base for the three casual assumptions



This analysis of the existing evidence in support of the main causal linkages underpinning the DP-2 project logic shows that the theory is plausible in the sense that it is supported with the prior evidence suggesting that the activities (except a few exceptions highlighted as having weak evidence in Figure 1), if implemented, will lead to the desired results. Our inception visit suggested that the DP-2 country teams have a good grasp and understanding of the project ToC and how to implement the project, but the success of the project implementation at the outcome level will also depend on external factors beyond the control of DP-2. The DP-2 ToC does not identify any contextual factors as important mediating variables for the progress of the project implementation and, therefore, there is a big question mark as to whether or not the project would achieve its objectives in reality. Table 1 provides a list of risks and a fuller list of contextual assumptions for the three key causal intervention packages that are discussed in further detail against the baseline findings in subsequent chapters of this report.

Table 1: Risks and assumptions of DP-2

	Teacher training	Girls' clubs	Community involvement
Assumptions (that if not fully in place, will limit impact)	Teachers motivated to learn and put into practice their new skills and knowledge; parents and children are convinced that girls' education is worth	Girls' clubs offer a safe environment for girls to contribute and learn; parents are convinced that clubs are worth investing in; clubs	Community members are convinced that girls' education is worth investing in; communities can hold schools accountable for the outcomes of the services

	Teacher training	Girls' clubs	Community involvement
	investing in since teaching delivers; teachers who were previously trained stayed in their original schools; teachers have the basic skills and knowledge to be able to benefit from additional skills offered through training; teacher training improved attendance and children have support inside and outside the school to perform well; marginalised communities have the necessary resources to send their children to school regularly	function properly with relevant content and curricula	they provide; schools and communities have good relationships and communications; community members have relevant skills and knowledge and bring to bear available resources to contribute to improved educational access and outcomes
Risks	Teacher absenteeism; ⁴⁸ high teacher turnover, especially in rural areas; ⁴⁹ school characteristics ⁵⁰ ; marginalised communities and families struggle with poverty and do not have resources to regularly send their children to school and encourage their transition	Clubs re-state the same classroom environment of teaching (teacher dominance, punishment, gender bias, etc.); girls do not regularly attend schools and subsequently clubs for a range of reasons	Power relations between head teachers, teachers and community members; poor communities do not necessarily have relevant resources, skills, and knowledge; community attitudes to girls' education are not supportive of it; parents are absent to prioritise children's schooling
Alternative explanations	Other projects	Other projects run by development partners and/or schools	Other community engagement projects or policies

Teachers, parents, and girls face multiple barriers to school attendance and learning. It is therefore not surprising that we list a range of risks to the DP-2 implementation. Therefore, it is important that DP-2 is informed by an analysis of the main barriers to girls' schooling in each country. Such an analysis allows DP-2 to target the main constraints and therefore increases its chances of achieving its own objectives. The fact that DP-2 has several components and intends to tackle multiple barriers (given that they are context specific) increases the chances of the project to be successful. Next, we discuss the barriers to girls' education in more detail.

Barriers to girls' education

The barriers to girls' education identified in the DP-2 ToC are largely supported by the literature, although the latter suggests a longer list. These factors can be divided into 'push' and 'pull' factors' in that 'out-of-school' factors pull girls out of school and 'in-school' factors push girls out of school. The combination of

⁴⁸ Chaudhury, N., Hammer, J., Kremer, M., Muralidharan, K. and Rogers, H. (2006) 'Missing in action: Teacher and health worker absence in developing countries'. *Journal of Economic Perspectives* 20, No. 1: 91–116.⁴⁹ Bennell and Akyeampong (2007).

⁴⁹ Bennell and Akyeampong (2007).

⁵⁰ Bennell, P and K. Akyeampong (2007) 'Teacher Motivation in Sub-Saharan Africa and South Asia', *Educational Papers*. Department for International Development, London; Robinson, V. Lloyd, C. and Rowe, K. (2008) The Impact of Leadership on Student Outcomes: An Analysis of the Differential Effects of Leadership Types, *Educational Administration Quarterly*, 44: 635-674.

these factors is evident across the three countries. Pull factors often connected to poverty in the form of household chores and the need to earn money but also include parental/community attitudes, sibling care, early marriage/pregnancy, hunger/ill health, and distance to school. Push factors include school characteristics, quality of teaching, safety, school costs, inadequate sanitation facilities, etc.

According to Parsitau, in Kenya, the status of Maasai girls' education is extremely weak compared to the national averages for girls in Kenya. Of those who enrol in the first year of school barely one in five make it to their eighth year, with dropouts attributed to early marriage, FGM, poverty, traditions, ignorance, and preference for boys⁵¹. Other school-related challenges include lack of funding for education, lack of trained teachers, lack of classrooms, poor sanitary conditions (e.g. bathrooms, toilets, and sanitary pads), insufficient desks and chairs, and unaffordable school fees⁵²

Access and gender in schooling within a cultural framework are examined by Stephens in a study in Ghana. Interviews with parents and elders suggest that the major reasons for not enrolling girls in school are economic: the opportunity cost of enrolling girls are higher than those for boys (with females, as indicated earlier, spending more time on household tasks) and the perceived economic return to parents of sending their daughters to school tends to be lower than those for their sons, a suggestion being too that patrilineal descent systems such as that seen in northern Ghana mean girls are incorporated into a wife's husband's family, while boys stay with that of their parents⁵³. Data shows that parents and pupils frequently commented on the real costs in terms of fees, uniforms, and books. Nineteen dropout girls were interviewed for the study⁵⁴. Almost all gave fee-paying and/or money for food as a major reason for withdrawing from school. Besides opportunity costs, factors discussed above such as early marriage, child fostering, and lack of proper sanitation facilities in schools are found to be major barriers for girls' education in Ghana by de Groot *et al*⁵⁵. According to the authors, a lack of perceived benefit and low levels of parental education contribute to girls' dropping out.

A complete review of literature on basic education in Nigeria⁵⁶ suggests that out-of-school factors contributing to non-enrolment, absenteeism, and/or dropout from school include illness or hunger, the need to do paid/unpaid work (including caring for siblings and sick relatives), an inability to pay school costs and fees, lack of uniforms or other materials, and parental attitudes. The in-school factors are related to the quality of education and generally revolve around poor infrastructure and facilities, lack of space or overcrowding, teacher absenteeism, the poor quality of teaching and learning taking place, an inability to understand the medium of instruction, and pupil avoidance of harassment, bullying, or corporal punishment. In fact, literature from sub-Saharan Africa shows that girls and boys in primary and secondary schools are often subject to sexual violence and harassment, corporal punishment, and physical and psychological victimisation from their teachers and their peers⁵⁷. Findings from the Dunne

⁵¹ Parsitau, D. S., 2017a. *How girls' education intersects with Maasai culture in Kenya*. [Online] Available at: <https://www.brookings.edu/blog/education-plus-development/2017/07/25/how-girls-education-intersects-with-maasai-culture-in-kenya/> [Accessed 30 April 2018]

⁵² Parsitau, D. S., 2017b. *Engaging the custodians of tradition and culture: Leveraging the role of multiple actors in Masaai Girls' Education*, s.l.: Brookings

⁵³ Stephens, C., 2000. Girls and Basic Education in Ghana: A cultural enquiry. *International Journal of Educational Development*, Volume 20, pp. 29-47

⁵⁴ Ibid.

⁵⁵ de Groot, R. et al., 2015. *Heterogeneous impacts of an unconditional cash transfer programme on schooling: Evidence from the Ghana LEAP Programme*. s.l., Innocenti Working Paper No. 2015-10-UNICEF

⁵⁶ Humphreys, S. (2014) 'Issues of educational access, quality, equity and impact in Nigeria: The EDOREN review of the literature on basic education'. Evans Publishers Ltd accessed on 18 July from <https://edorennigeria.files.wordpress.com/2016/01/the-edoren-review-of-literature-on-basic-education.pdf>

⁵⁷ Vanner, C., 2018. 'This is a competition': The relationship between examination pressure and gender violence in primary schools in Kenya. *International Journal of Educational Development*, Volume 62, pp. 35-46.

(2006) study⁵⁸ show that, in all sampled schools in Ghana and Botswana, it was remarkable that gender issues were not seen as a matter of concern. The very obvious gendered behaviour by students and teachers was taken for granted as ‘natural’ and attributed to biology and the consequent socialisation process⁵⁹. Dunne found that frequent complaints from girls about sexual harassment and verbal abuse by boys were largely ignored or trivialised as they were explained as ‘teasing’ or ‘playfulness’ and regarded by teachers as ‘a necessary part of growing up’⁶⁰. There is not enough evidence on the effect of interventions on working with boys on gender equality, engaging with faith communities, and developing combined programmes involving community work.⁶¹ Interventions to shift gender norms are under-researched, but there is a consensus in the literature that expanding and improving girls’ schooling is linked with the processes of social change associated with building an enabling environment and changes in institutional processes.⁶²

The discussions above suggest that according to prior knowledge some barriers to girls’ education can be resolved by DP-2 activities. In particular, in-school factors associated with poor teaching, violence and harassment at school, and poor school and community communications and relationships are directly targeted by the project. However, one of the main out-of-school factors, i.e. poverty, is not directly targeted and therefore renders a significant risk to project results. Although not part of the agreed DP-2 design and budget, there is a strong evidentiary base⁶³ that targeting cash interventions at populations most in need and at grade levels where dropout levels are highest is most likely to have an impact on girls’ participation, particularly if these are seen to be objective and fair. Conditional cash transfers are more effective in improving girls’ enrolment than unconditional transfers, but unconditional transfers can have a positive impact on reducing teen pregnancy and early marriage. Moreover, resource interventions provided in cash for families or children impact on success in the grades achieved.⁶⁴ We note that a small subset of Ghanaian DP-2 schools (partnered with the Campaign for Female Education (CAMFED)) will be receiving bursaries targeted toward girls in need. However, given the limited scope of the activity, it will not be enough to address the economic barrier to girls’ education for the wider DP-2 population.

It is safe to conclude that DP-2 is less likely to achieve its high-level outcomes and impact on its own. It will be successful as part of a package of interventions with shared objectives and similar activities conducted by other projects. To measure change attributable to DP-2 at endline, the evaluation will need to take into consideration the different programmes currently implemented in the target areas and schools of the study (i.e. treatment and control groups) to isolate the effect of DP-2 alone. We will do this through both the quantitative and qualitative data collection at each point of the evaluation.⁶⁵

Overall, we conclude that the DP-2 ToC, although helpful, would benefit from more detail on the causal assumptions linking outputs, intermediate outcomes, and impacts, as well as contextual assumptions and risks that can affect the project delivery and results. The DP-2 ToC largely has the theoretical base in support of each causal pathway, but the literature shows that the pathways are dynamic and far from being linear. Although the project assumptions are valid, their implementation in the real world will be affected by factors outside of DP-2’s control. Moreover, the barriers to girls’ education identified in the ToC are in line with those identified in the

⁵⁸ Dunne, M., 2006. Gender, sexuality and schooling: Everyday life in junior secondary schools in Botswana and Ghana. *International Journal of Educational Development*, Volume 27, pp. 499-511

⁵⁹ Ibid.

⁶⁰ Ibid.

⁶¹ Unterhalter *et al.* (2014).

⁶² Ibid.

⁶³ Ibid.

⁶⁴ Ibid.

⁶⁵ For instance, in Annex 17 we present a short overview of other projects/programmes mentioned during our baseline data collection in the sampled schools in Kenya, Nigeria, and Ghana.

literature, and the project activities seem to be relevant as the literature demonstrates. However, one of the main barriers to girls' education – poverty, which is especially acute in the population that DP-2 works with – is likely to remain a major constraining factor if DP-2 is to achieve its objectives in all three countries. In general, a number of pull and push factors seem to be similar across the countries (e.g. culturally driven attitudes to girls, paid and unpaid work, inadequate sanitation facilities at schools, etc.) where more contextually varying barriers could be linked to parents' and households' characteristics (e.g. pastoral or nomadic populations have different lifestyles to those who are settled). Some barriers could be affected by local climate, e.g. drought or rainy seasons, or by a religion that is predominant in any given location. While the common barriers could potentially be addressed by the same set of project activities, others would require activities targeted and tailored to the local context. The subsequent chapters will discuss the ToC in more detail using the primary data collected in each country.

Table 2 outlines the DP-2 design and interventions.

Table 2: Project design and intervention

Intervention type	What is the intervention?	What Intermediate Outcome will the intervention contribute to and how?	How will the intervention contribute to achieving the learning, transition, and sustainability outcomes?
Teacher Capacity Building	Teacher Training and Mentorship – Teachers gain requisite confidence, skills, and resources to teach inclusively and effectively	Improved teaching skills will lead directly to better learning outcomes and a better environment for girls, encouraging them to stay in school	Increased number of CAPs that specifically address learning and retention
		Increased usage of learning centre equipment leads to better instruction and also indicates that teachers are using improved teaching methods	Increased number of schools using learning centres during and after school hours meaning learners enjoy learning, remain in school, perform better, and transition to higher levels
		Teachers are able to access mobile-phone technology and use it to interact with the programme; reminders and periodic quizzes will work to reinforce key skills/lessons	Increased number of teachers accessing Cell-Ed refresher questions/reminders meaning teachers teaching better for learners to be retained in school
Community Capacity Building in the Development of Action Plans	Community Training and CAP follow-up – Communities take action to advance girls’ education and create an enabling environment	Community ownership of learning gains will lead to better results for girls and bring focus on the part of communities to address learning in schools	Increased number of CAPs that specifically address learning and retention
		Community ownership of schools more generally will lead to better results for girls and encourage them to stay in school	Increased number of concrete steps taken to implement CAPs
Mentors Capacity Building, Mentorship and Support	Mentors Workshop and Club activities – Girls gain life skills training, mentoring support, and access to resources	Girls participating in MBW Curriculum will have greater self-esteem, self-efficacy, leadership, and other life skills	Increased number of girls trained in life skills curriculum (based on MBW)
		Girls engaging in income-generating activities are more likely to gain financial literacy as well as use those funds to continue schooling in the future	Increased number of girls reporting participation in income-generating activities as part of a club
		Additional support for girls in clubs will lead to better learning outcomes, particularly for those requiring remedial assistance	Increased number of girls reporting reading and maths tutoring/academic support
Capacity Building and Governance	Stakeholder Engagement through joint monitoring and Training – School and government partners take the lead on integration, monitoring, and follow-up support	MoE support in the form of monitoring visits creates a sense of ownership on the part of the relevant MoEs	Increased number of monitoring visits MoE officials conduct
	Teacher training, mentorship, support and distribution of ELS video content	Resource teachers that conduct training and other support lead to the programme remaining fresh in participant schools	Increased number of schools with follow-up support (e.g. in school training) led by resource teachers

1.3 Target beneficiary groups and beneficiary numbers

Box 2: The project's contribution

Girls across all primary and JSS grades are the primary target group for DP-2. All are benefiting significantly from improved teaching, access to educational media content, girls' club activities (for those involved), and more enabling and supportive of girls' education school and community environments. Within this broader population, the project is focusing its teaching and learning interventions on mid to upper primary, specifically 172,948⁶⁶ girls in primary 4, 5, and 6 across 414 schools in Kenya, 500 in Nigeria, and 487 in Ghana. While there are differences between each country and region, most of the areas are rural/semi-rural in nature (the schools in Nairobi, Kano Municipal, and Tamale Municipal being obvious exceptions) and all schools were specifically selected as having high concentrations of marginalised girls. Further, all primary schools selected were originally part of DP-1 and all JSS were selected on the basis of their taking in girls from project primary schools (feeder schools, i.e. in the same catchment areas).

The total number of girl beneficiaries for all three countries is 461,351 (204,031 in Nigeria, 104,365 in Ghana, and 152,955 in Kenya) and is based on the assumption that, due to the nature of instruction in project schools, all girls (and boys as secondary beneficiaries) can be said to be reached by the project. This reflects the experience of the project that the materials and training provided by DLA are used across all years. Note that this number does not include an estimated 20,000 girls in secondary school in Kenya as those schools will receive less rigorous training for teachers but will still be supplied with all learning materials and club support.

While the basic structure of the project remains the same from GEC1 to GEC-T, there are significant alterations that have been made to incorporate lessons learned and improve the overall approach of the project. The biggest single change is the increased focus on teaching literacy and numeracy. Whereas the original project focused on improving general pedagogical practice, DP-2 focuses largely on improving teaching basic reading and mathematics skills that were found lacking in DP-1. Accordingly, the Monitoring, Evaluation, and Learning (MEL) framework has been adjusted to reflect this shift in focus, and much of the M&E efforts focus on the efforts of the project to improve these specific areas.

In addition to this focus, the project has also included a more robust approach to supporting girls' (and boys') clubs in each school. During GEC1, clubs were seen as an optional exercise that was promoted but not required by the project and supported through the creation of a girls' club toolkit. This toolkit was broad by design to allow each club to identify their priorities and, while popular, led many schools to take very different approaches to implementing the clubs. For GEC-T, DLA has worked with CAMFED to promote a specific curriculum – with accompanying videos, produced by DLA – that promotes life skills (MBW) along with a micro-business toolkit designed by the project to promote income-generating activities.

The final alteration of note is significant in its scope and focus. In order to better address the needs of below-grade, at-risk students, the project has engaged in a targeted effort to promote remedial learning groups for maths and English in each school. This approach consists of working with each school to determine those mid- to upper-primary-level students needing additional support in basic maths and English and engaging them in special remedial sessions designed to shore up these critical basics. These remedial sessions are to take place over the course of the school year and be administered by DLA-trained teachers, specifically to address targeted deficiencies. The monitoring approach for these remedial sessions includes both the standard classroom observation and focus group discussions (FGDs), as well as an additional periodic testing component to determine progress in each term.

⁶⁶ This figure and the figure for total project reach is an estimate based on enrolment data provided by each relevant MoE.

Direct beneficiaries include those who are the primary focus of the DP-2 programme. They are expected to have received the full complement of programme activities. This includes exposure to teachers who have received the teacher capacity building component, live in communities that have received capacity building to develop and implement action plans, have the opportunity to join girls' clubs, and go to schools that have been exposed to the capacity building and governance component (see Table 2 above).

Given the programme's focus at level of both the school and the community, it is assumed that there will be a significant number of indirect beneficiaries who will also benefit from the improvements in capacity at both the teacher, school and community levels. It is therefore expected that these indirect beneficiaries will benefit from the teacher capacity building component (where teachers teach across grades); the community capacity building component; and the school level capacity building and governance component.

Below we present the beneficiary numbers calculated by the evaluation, utilising girls' enrolment numbers for primary levels 1 through 6 (primary 7 & 8 in Kenya) across the sampled treatment schools from the baseline data and JSS enrolment numbers in Ghana and Nigeria as per data provided by DLA⁶⁷. We find the total direct beneficiary numbers to be **461,351** girls. We calculated the number of direct beneficiaries by using the total number of girls enrolled in primary levels 1 through 6 (primary 7 & 8 in Kenya) for all treatment schools in the baseline sample and applying weights to get at the final primary level estimates. For JSS in Ghana and Nigeria, since we did not gather data on enrolment at the JSS level, we used data provided to us by project, to estimate the number of direct girl beneficiaries.

As for indirect beneficiaries, the estimate provided by the project is **502,005** boys across both primary and JSS in the three countries. The same approach explained above was applied to calculating the indirect beneficiaries. We find the total number of indirect beneficiaries to be **408,935**. **Overall our estimations for both direct and indirect beneficiaries are 870,285 students (both boys and girls) which is far off from the numbers reported by the project.** We briefly discuss the differences in the beneficiary numbers by country below:

- **Kenya:** the direct and indirect beneficiary estimations provided by the project and that calculated by the evaluation align closely. We also compared these estimates to the Kenya EMIS 2016 data for the intervention schools and these estimates are also aligned.
- **Ghana and Nigeria:** In the case of Ghana and Nigeria, the project estimates for direct and indirect beneficiary do not align with the evaluation estimates. To understand the reasons for these variations, we triangulated the baseline data with two data sources i.e. the EMIS (2017/18 for Ghana and 2017 for Nigeria) and project data (Nigeria – Sept/Oct 2017 and Ghana – unknown time period by gathered by the project country team at various points). We find that the baseline enrolment estimates are more correlated and in line with the EMIS data, relative to the project data.

Based on our comparison, we believe the baseline enrolment data are accurate as these numbers were gathered **directly from school enrolment records** for the relevant primary grades (primary 1-6 in Ghana and Nigeria and primary 1-8 in Kenya). **Therefore, we are inclined to recommend the baseline estimates as the final beneficiary figures to be considered at baseline.** However, we would like to note that in the case of Nigeria, DP-2 is working with larger schools than average. Given the need to find an appropriate control group against which to measure impact some larger treatment schools were dropped from the evaluation sample, as there were no control schools to match with. Whilst survey sample weights were used to correct for this, it is possible that this overall estimate represents a 'lower end' estimate of enrolment and under-estimates the overall beneficiaries served by DP-2 in Nigeria. In

⁶⁷ Enrolment data for JSS schools was not gathered at baseline, therefore enrolment data was used from the 'MASTER SCHOOL LIST' dated November 2018 provided by DLA.

addition, at midline, we will work with the project to verify the enrolment numbers gathered by both project and the evaluation, to ensure we have similar records moving forward.

Table 3: Project beneficiary numbers

	Direct beneficiaries <i>(primary 1-6 girls in all countries; primary 7 & 8 in Kenya and JSS-1,2 and 3 girls in Ghana and Nigeria)</i>	Indirect beneficiaries <i>(primary 1-6 boys in all countries; primary 7 & 8 in Kenya and JSS-1,2 and 3 girls in Ghana and Nigeria)</i>	Total beneficiaries
Project estimations	518,843 (Nigeria: 244,753) (Ghana: 124,820) (Kenya: 149,270)	502,005 (Nigeria: 228,449) (Ghana: 122,266) (Kenya: 151,290)	1,020,848 (Nigeria: 473,202) (Ghana: 247,086) (Kenya: 300,560)
External evaluator (EE) estimations	461,351 (Nigeria: 204,031) (Ghana: 104,365) (Kenya: 152,955)	408,935 (Nigeria: 144,445) (Ghana: 111,697) (Kenya: 152,793)	870,285 (Nigeria: 348,476) (Ghana: 216,062) (Kenya: 305,748)

2. Baseline evaluation approach and methodology

The evaluation for DP-2 uses a TBE approach and is designed as a quasi-experimental impact evaluation to quantify and attribute the impact of DP-2 on learning and transition by employing mixed methods to address the evaluation question around DP-2. In particular, we apply Contribution Analysis and CEM-DID approaches, where both are combined to measure changes in final outcome variables and unpack how changes will take place at the endline. The TBE uses as its foundation the project ToC and allows us to better examine the causal links between DP-2 activities and outputs and expected intermediate outcomes and impacts. Given the complexity of the project, in which a number of interlinked interventions are expected to contribute to headline impacts against *learning, transition, and sustainability*, our TBE approach will also look into unpicking the linkages between project activities, outputs, intermediate outcomes, and final outcomes, and, to the degree possible, seek to understand the contribution that the various project interventions have made toward achieving progress against headline outcomes.

The baseline evaluation examines the plausibility of the ToC by reviewing stakeholders' understanding of DP-2, interrogating the key causal assumptions of the project logic and identifying factors that have a key bearing on the achievement of the stated intermediate outcomes and impacts. It also explores the baseline situation in the sample schools for this evaluation with regards to girls' learning outcomes, attendance, transition, and classroom teaching practices.

Box 3: The DP-2 definition of marginalised girls

DP-2 defines marginalised girls as any girl who is at risk of not accessing basic education and dropping out of school or failing exams due to absenteeism, cultural practices, gender inequalities, and child abuse among other barriers. It also includes girls who are deprived of basic needs and rights, lack equal opportunities, or are discriminated against because of religion, sex, etc.

2.1 Key evaluation questions and the role of the baseline

In this section, we present the key evaluation questions and discuss the role of the baseline evaluation.

Table 4 presents the key evaluation questions for DP-2.

Table 4: DP-2 key evaluation questions

OECD-DAC criteria	Evaluation questions
Impact	<p>Learning: Has basic literacy and numeracy for marginalised girls increased as a result, at least in part, of the project and, if any, then why and how?</p> <p>Transition: Has the project (and specific project activities) increased marginalised girls' rate of primary school completion? Specifically, have girls been enabled to complete primary and continue school? If not, what activities do girls that drop out engage in?</p> <p>Self-efficacy: Do marginalised girls report a better degree of self-efficacy as a result of the project, especially as a result of attending girls' club and why so, if any? What aspect of the</p>

OECD-DAC criteria	Evaluation questions
	clubs' activities and club types are most appealing to them and why? How does the improved self-efficacy affect cohort girls' experience of schooling, if any?
Effectiveness	<p>Attendance: By the end of the project, are more marginalised girls in the project areas attending school at a greater rate? Has the project contributed to this and, if it has, then in what ways?</p> <p>Quality of teaching: What aspect of teacher training improved gender-responsive, student-centred, and interactive pedagogy? Has teacher training contributed to improved numeracy and literacy and increased school attendance and transition to secondary school among marginalised girls and in what ways, if any? Has the teacher training improved classroom teaching in literacy and numeracy and in what ways, if any?</p> <p>Life skills: Are there changes in students' (boys and girls attending DP clubs) attitudes to schooling and behaviours (school transition) as well as their self-efficacy as a result of them attending girls' and boys' clubs and in what ways, if any?</p> <p>Community-based attitudes and behaviour change: Are there any changes in the attitudes and behaviours of parents of marginalised girls, and community leaders (those who are part of CAPs), regarding the value of education for girls as a result of CAPs, and in what ways?</p> <p>Process: Have project activities and inputs been successfully implemented as planned at the design stage? If not, why not?</p>
Efficiency	Do the activities of the DP-2 represent value for money (VfM)?
Sustainability	What plans and strategies are implemented/steps taken by sampled school committees, school administrators, and MoEs to assure the continuation of project investments and results after the donor funding is over?

Note: The wording of some of the evaluation questions has been further refined following the inception report submitted in February 2018 to improve clarity and measurability.

Moreover, additional to these key evaluation questions outlined in Table 4, during the inception phase we identified together with the DP team a series of evaluable core questions that the evaluation should seek to answer, which are presented in Table 5. **The purpose of the core questions is to further understand and identify the contribution of each of the DP-2 activities (i.e. teacher training, girls' clubs, etc.) to achieving the outcomes.**⁶⁸

⁶⁸ Annex 6 provides the evaluation matrix, which presents the full set of evaluation questions and accompanying indicators to measure progress against these questions.

Table 5: DP core questions for the evaluation

Question no.	Core questions
DP 1	What is the role of DP teacher training in producing better numeracy and literacy rates and increased attendance and transition to primary school among marginalised girls in the selected schools, if any?
DP 2	What is the role of DP-supported girls' clubs in the selected school in improving the self-efficacy of marginalised girls, if any, and how might it contribute to their better literacy and numeracy? Does cohort girls' increased self-efficacy affect their transition rates, if at all, and how?
DP 3	What is the role of CAPs in increasing school attendance among marginalised girls, improving their numeracy and literacy rates, and transition to secondary school in the selected school, if any?
DP 4	What aspects of the DP teacher training are most useful for teachers to improve classroom teaching and learning, if any?
DP 5	What aspects of girls' clubs are most useful to their education and self-efficacy, if any?
DP 6	What aspects of CAP are most useful to communities to encourage their engagement in school activities, if any?

The role of the baseline evaluation is:

- To gather data to understand the education context in target areas of the project and the perceptions of all stakeholders (i.e. government, school, teacher/student, and parent/community level) of DP-2, girls' education, and the barriers to learning and transition;
- To establish baseline levels for key impact (i.e. learning and transition) and intermediate outcome (i.e. attendance, quality of teaching, life skills, and community attitudes and behaviours) level indicators. To identify differences across various subgroups such as region, age, gender, disability, etc. so that we can measure subsequent changes in the midline and endline data collection rounds and examine the attribution and contribution of the project to the outcomes;
- To establish a baseline sustainability score of the project at the community, school, and system levels with the data available and outline factors likely to hinder/support the sustainability of project activities and results to the extent possible;
- To assess the project's approach to addressing gender inequalities, whether the design is gender sensitive, how the project is promoting gender equality through its interventions, and which aspects are gender transformative; and
- Lastly, to provide recommendations and learning for the development of the project's MEL strategy as well as reflections on the project design, implementation, and sustainability arising from the baseline findings.

2.2 Impact and intermediate outcomes

In this section, we present and articulate the project's impact and intermediate outcomes.

According to the DP-2 ToC, there are three main outcomes: *Learning, transition, and sustainability.*

- **Learning:** The learning outcome for the DP-2 is divided into three categories: *literacy, numeracy, and self-efficacy*. Through *literacy and numeracy*, the project is looking to increase the foundational knowledge and mastery of both English and maths skills at the appropriate levels of primary and JSS of marginalised girls in the target areas. DP-2 has defined *self-efficacy* as an outcome that refers to improving the self-esteem, confidence, and life skills of marginalised girls to enable them to achieve functional literacy, numeracy, and exam results enabling completion of primary and transition to secondary school.
- **Transition:** Transition as an outcome for DP-2 is defined as marginalised girls transitioning within upper primary years and from primary to secondary school or for those that are unable to continue their education transitioning to other appropriate employment, vocational training, or non-formal education opportunities.
- **Sustainability:** Sustainability will be measured at three levels: *community, school, and system level*. This is discussed in detail further in this section below.

The intermediate outcome level is split into four: attendance, quality of teaching, life skills, and community-based attitudes and behavioural change.

- **Attendance:** Attendance as an intermediate outcome will measure whether girls are attending school more regularly as a result of the project due to increased enthusiasm for school, greater support on the part of the community for girls' education, etc. Drawing on the experience from DP-1, the project believes that the appeal of the media centres along with more gender-responsive and girl-friendly school environments and generally improved teaching methods will result in greater enthusiasm for school on the part of students. This will be in addition to greater support on the part of communities as a result of sensitisation efforts through the CAP process to support girls' attendance.
- **Quality of teaching:** Quality of teaching as an intermediate outcome will look to demonstrate the degree to which the project has improved overall teacher quality (i.e. in the utilisation of effective numeracy and literacy teaching strategies and child-centred, gender-responsive approaches, as well as the use of media in the classroom) and the degree to which improved teaching links to better outcomes in the classroom, including in encouraging girls to remain in school and transition to the next level. This outcome is a major focus of the project as the ToC is largely predicated on the assumption that improved teaching and a more welcoming and supportive environment for girls directly leads to better learning outcomes and encourages girls to continue in school.
- **Life skills:** Life skills will focus primarily on those girls engaged in girls' clubs as part of the intervention. This smaller focus will allow the project to determine if participation in these clubs does have an appreciable effect on practical skills learned through participation in these clubs as well as linkages to learning outcomes, including self-efficacy. While girls will be the primary focus of these efforts, those engaged in boys' clubs will also be queried to assess the degree to which participation affects their outlook, particularly toward girls' education.
- **Community-based attitudes and behavioural change:** The attitudes and behaviour change of community members⁶⁹ as an outcome will look at measuring the general views and feelings toward girls' education and overall feelings about girls in their communities transitioning to higher levels of education among different community members. Specifically, this will mean looking at the overall level of support among parents for sending their children to school, and this will be compared and contrasted to the attitudes of both boys and girls in these same communities.

⁶⁹ Community members specifically refer to those individuals participating in school project management committees and taking part in community actions coming out of the community action planning process, while parents are those parents of randomly selected cohort girls in sample schools and boys are those participating in clubs.

Table 6: Impact and intermediate outcomes for measurement

Outcome	Level of measurement	Tool and mode of data collection	Rationale	Frequency of data collection
Literacy	Schools	Early Grade Reading Assessment (EGRA) and Secondary Grade Reading Assessment (SeGRA)	Age- and grade-appropriate EGRA and SeGRA type testing is essential to demonstrating improvements in literacy	Annually
Numeracy	Schools	Early Grade Maths Assessment (EGMA) and Secondary Grade Maths Assessment (SeGMA)	Age- and grade-appropriate EGMA and SeGMA type testing is essential to demonstrating improvements in numeracy	Annually
Self-efficacy Increased self-esteem, confidence, motivation, and life skills	School and clubs	Girls' survey and FGDs	A pre- and post-survey approach can best assess how project interventions have shifted targeted attitudes and behaviours	Annually
Transition The transition of marginalised girls within upper primary grades, from upper primary to JSS, to employment, training, or economic activities	School and household	Girls' survey, household survey, and FGDs and key informant interviews (KIIs)	The girls' and household surveys best reach target girls in a safe environment in which to collect this information. The FGDs and KIIs help provide context to explain the trends in the transition	Annually
Intermediate outcome 1: Attendance More marginalised girls are coming to school at a greater rate and attending regularly	School and household	School, household, headcount tool, and FGDs	Given the unreliability of school registers, the project will seek to gather data on each of the selected girls for the evaluation and further triangulate this information with the attendance spot checks and household survey data from the parents or guardians of the children	Annually
Intermediate outcome 2: Quality of teaching Increased knowledge and practice of gender-responsive, student-centred, interactive pedagogy and use of video/media in the classroom; Increased use of effective literacy and numeracy strategies in the classroom to teach English and maths	School	Classroom observation	Observing teachers put skills into practice is the best means of assessing the level to which they have internalised training	Annually and quarterly by DP

Outcome	Level of measurement	Tool and mode of data collection	Rationale	Frequency of data collection
<p>Intermediate outcome 3: Life skills Changes in marginalised girls (and, to the extent possible, boys) related to targeted attitudes and behaviours in life skills to which project-supported activities in extracurricular clubs have contributed</p>	School, club, and community level	Girls' survey, FGDs, and KIIs	A pre- and post-survey combined with FGDs and KIIs best reaches girls in clubs in a safe environment in which to collect this information	Annually
<p>Intermediate outcome 4: Attitudes and behaviour Changes in attitudes and behaviours of male peers, parents, and community members regarding the value of education for girls</p>	Household	Household survey and FGDs	By using both the household survey and FGDs, the project gains both breadth from target groups along with in-depth answers from FGDs	Annually

According to the OECD-DAC criteria, sustainability is concerned with measuring whether the benefits of an activity or project are likely to continue after donor funding has been withdrawn. Also, projects need to be environmentally as well as financially sustainable. For this evaluation, sustainability is defined as **‘whether the project can demonstrate that the changes it has brought about which increase learning and transition through education cycles are sustainable’**.⁷⁰

Sustainability for the DP-2 will be measured at three levels: *community, school, and system level*.

- At the community level, the focus will be on how sustainable activities are in relation to the CAP process and changes in attitudes toward girls’ education;
- The school level looks at the implementation of plans to continue after the project and level of support of head teachers and administrations; and
- The system level focuses on the implementation of local plans for local MoE offices to integrate and support project investments in the long term.

Based on the sustainability outcome framework presented in Table 7, a number of mixed data sources will be used to answer whether sustainability is being achieved at each of the three levels. The data sources will be mainly qualitative, but will also include some secondary and quantitative data.

- **Qualitative data:** this will include a mix of semi-structured interviews and discussions with key stakeholders identified at each of the three levels;
- **Quantitative data:** this will include data from specific modules/questions as part of the household and school surveys and a review of project M&E data; and
- **Secondary sources:** this will include a review of project documentation (i.e. implementation plans and workplans), review of government plans/policies, school administration planning or implementation documents, CAPs, learning centre management plans, and any other relevant literature/documentation.

To assess whether the sustainability aim under each of the three levels has been met, we will use the sustainability scorecard developed by the Fund Manager. We have adapted the Scorecard to the DP-2 sustainability framework to ensure the criteria for scoring align with the indicators being measured at each level. Our analysis will assess against the sustainability framework:

- Whether conditions have been met against each of the three levels; understand what work the project has done toward meeting the conditions and what it needs to do for the intervention or activity to remain sustainable;
- If the conditions are not met against each of the three levels, we will assess whether this is something within or beyond the scope of the project; and
- If there is inadequate data to assess whether or not the conditions have been met, the gap will be identified for further investigation by the project or the evaluation in the subsequent years.

⁷⁰ GEC-T MEL Guidance Part Document.

Table 7: Sustainability outcome for measurement

Sustainability Level	Measurement	Where will measurement take place?	What source of measurement/ verification will you use?	Rationale – clarify how you will use your qualitative analysis to support your chosen indicators	Frequency of data collection
Community	Number of communities that have repeated the community action planning process after initial training	Household/media centre management committees	Community Survey; FGDs; Planning documentation	Qualitative analysis will be used to probe the level of commitment of communities and link this to their actions	Annually
	Community members expressing in FGDs a desire to address girls’ education needs after project completion	Households/media centre management committees	FGDs	The analysis will be used to determine how attitudes and practices have been affected by the project	Annually
	Number of communities mobilising their own resources to take collective action to support girls’ education	Households/media centre management committees	Community Survey; FGDs	The analysis will look to determine why communities are using their own resources and assess the likelihood of continued support	Annually
School	Number of schools that have enacted plans to continue active use of educational media	Schools	School Survey; Planning documentation; FGDs	Qualitative analysis will be used to probe the level of commitment of schools and link this to their actions	Quarterly
	Number of schools that have conducted training and coaching internally	Schools	School Survey; KIIs; FGDs	The analysis will attempt to determine the quality and frequency of internal support and determine the likelihood of teachers continuing project-supported teaching practices	Annually
	Head teachers can describe the benefits of the project and a commitment to sustaining them in FGDs	Schools	FGDs; KIIs	Qualitative analysis will demonstrate to what degree school leaders find intrinsic value in the project as an indicator of their belief that investments and changes brought about by the project are worth sustaining	Annually
System	MoEs at the local level have enacted local education plans furthering project-related teacher development and school support, i.e. ongoing teacher training, follow-up teacher coaching at the school level, and general monitoring and support to use media in the classroom resources responsibly and to maximum effect	Local MoE offices	MoE FGDs; KIIs; Planning documentation	Given the centralised nature of MoE structures, focus groups and interviews are likely to obtain the correct information most efficiently	Annually
	Teachers report more engagement and support from local MoEs in FGDs	Schools	FGDs, KIIs	Analysis of this information can tell us if the perception at the school level tracks with MoE claims and be used to confirm a level of commitment by MoE officials	Annually

Sustainability Level	Measurement	Where will measurement take place?	What source of measurement/ verification will you use?	Rationale – clarify how you will use your qualitative analysis to support your chosen indicators	Frequency of data collection
	Local MoE heads express desire and ability to continue the project in KIIs	Local MoE offices	KIIs	Analysis of KIIs will ascertain MoEs' enthusiasm for the project directly, how they have or have not incorporated it into their ongoing activities and ways of working, as well as their belief as to whether they are likely to invest further in the absence of continued material support from the project	Annually

Source: DP-2 MEL Framework

It is worth noting some caveats in regard to measuring sustainability at the baseline. First, we think it is still early to talk about the sustainability of DP-2 at this stage since communities, teachers, and parents have not yet seen the full results of the second phase of the project. Consequently, it would not be wrong to suggest that the project stakeholders could not make ‘informed’ judgements about the project and its results. Second, the methodology is not gender sensitive enough to fully mainstream the gender lens throughout the analysis. In particular, the schools and system levels should consist of questions with a specific gender focus, e.g. communities which elected powerful female representatives as members of CAP, female leaders as role models for girls, female mentors, etc. Third, the sustainability framework does not take into consideration the wider political and economic context of the country, which can affect the sustainability of the project to a certain extent. In conclusion, we suggest that measuring sustainability at the baseline is slightly premature and is better conceptualised and operationalised from the relevance perspective instead, i.e. the extent to which DP-2 activities are relevant to the needs and context of the countries it operates in and the factors that are likely to affect its implementation and sustainability in future.

2.3 Evaluation methodology

In this section, we outline the overall evaluation approach for DP-2. We provide details on the impact evaluation (2.3.1), process evaluation (2.3.2), and VfM (2.3.3) methodology. We also discuss the target beneficiary groups (2.3.4) and learning and transition cohort (2.3.5) for the evaluation followed by our mixed methods (2.3.6) and the gender and disability sensitivity approach (2.3.7).

The study is longitudinal and will span three years, starting with the baseline in 2018 and followed by midline in 2019 and endline in 2020. We will implement different evaluation designs and methodologies to address the various evaluation questions outlined in Table 4 and Table 5 using both quantitative and qualitative research methods at different stages of the evaluation. We discuss each evaluation methodology briefly below.

2.3.1 Impact evaluation methodology

2.3.1.1 Quantitative approach

We employ a quasi-experimental impact evaluation design – **CEM-DID** – to quantify and attribute the impact of DP-2 on learning and transition. The key challenge for the DP-2 evaluation is the fact that schools have been purposively selected into the treatment group, specifically as those who received the intervention under DP-1. As a result, we find some systematic differences between treatment and control units in some key characteristics. To overcome this challenge we have implemented a matching technique known as **Coarsened Exact Matching** to assess the impact of the DP-2 against key impacts and outcomes of the project. To bring further confidence to our quantitative estimates of impact, we plan to combine the CEM approach with **Difference-in-Difference** to further control for time-invariant differences between treatment and control units.⁷¹

⁷¹ Further details of this approach are given in the inception report, which is appended as Annex 6.

Identifying the impact and the intensity of treatment

We understand from discussions during the inception phase that a particular area of concern for DP-2 is understanding the impact of the project on girls who are exposed to the full range of DP-2 interventions. In technical jargon, given that girls self-select into some of the DP-2 interventions, there is a large potential for **one-sided non-compliance**.⁷² In other words, this means that there is the chance that some girls in intervention schools will not be exposed to the full range of DP-2 interventions, in particular given that girls self-select into attending girls' clubs and that in many cases we understand that it is more than likely that girls' club membership is capped. As a result, some girls will not be exposed to the full range of DP-2 activities.

The evaluation must, therefore, be able to distinguish between two types of impact:

- **Intention to Treat (ITT):** which gives the causal effect of being assigned to treatment. In other words, this gives the average treatment effect regardless of the fraction of the treatment group that is actually exposed to the full range of interventions. In some cases, this is the most useful estimate in determining the *effectiveness of DP-2* as it will describe the extent to which the project actually 'made a difference' in terms of improving educational achievement of girls who attended intervention schools
- **Average Treatment Effect on the Treated (ATET):** which gives the causal effect of actually receiving treatment. In other words, this gives the average treatment effect of the project conditional on actually receiving the full range of interventions. In some cases, this is the most useful estimate to understand the impact of the interventions if they are implemented as designed.

A challenge for the evaluation is that during the sampling for the baseline survey we will not know whether evaluation units (whether teachers or girls) will be *compliers* or *non-compliers*. For example, we will not know what proportion of teachers of literacy or numeracy in intervention schools actually undergo the full range of training that is prescribed by the project.

To resolve this concern, it will be important for the evaluation to have a good understanding of the fidelity and intensity of the DP-2 interventions across our sample of treated schools, teachers, and girls. This will be achieved by including questions in the quantitative survey that allow us to understand whether, for example, teachers have received training or girls have attended girls' clubs. This information will be triangulated with information from both our own process evaluation (see Section 2.3.2) as well as the DP-2 project management information system to deliver a holistic picture of the level of *non-compliance* within treatment units in our sample.

2.3.1.2 Qualitative approach

The quasi-experimental design is implemented alongside a qualitative approach serving two main purposes. The first purpose is to provide explanations of trends of key impact and intermediate outcome

⁷² Gerber and Green (2012)

level indicators across the evaluation points and to the extent possible triangulate the quantitative findings to answer some of the effectiveness and impact questions presented in Table 4. It will also explore the factors that stakeholders, especially girls themselves, perceive to be influential for continuing (or not) education, transition, and teacher effectiveness, to give indications about how DP-2 may be impacting outcomes or reasons why it may be failing to do so. It will also seek to examine contextual factors that may have affected project implementation and unanticipated consequences resulting from project delivery. The second purpose is to generate evidence to answer the set of core DP questions (Table 5). We have divided these questions into two series of core questions to structure the qualitative approach to this evaluation (i.e. data collection and analysis). The core questions seek:

- To understand **the contribution of the DP-2 intervention** to positive learning and transition outcomes (questions DP 1–3); and
- To understand **how the interventions may have contributed** (questions DP 4–6).

To address these two series of questions, we will employ contribution analysis (and process tracing) as an overall approach to design our TBE. As a way of operationalising contribution analysis at the baseline stage, the qualitative data collection was aimed at exploring the relevance of the project to its contexts and examining the perceptions of project users about the barriers to girls' school attendance, learning, and transition. We also examined community attitudes and beliefs toward girls' education as well as views and attitudes of the users and other stakeholders of the project objectives and activities. These baseline findings will enable us to identify and compare any changes to these impact and intermediate level outcomes to those at the follow-up rounds of data collection. In addition, our task was to examine the plausibility of the ToC by reviewing stakeholders' understanding of the project, interrogating the key causal assumptions, and identifying factors that have a key bearing on the achievement of the stated impact and intermediate outcomes' logic against prior knowledge as well as the primary data collected at this stage.

2.3.2 Process evaluation methodology

The process evaluation aims to understand how DP-2 is implemented and focuses on questions related to *process* as presented in Table 4. It will examine the implementation of the project (i.e. dose, uptake, reach, fidelity, and quality of implementation) and the contextual factors that affect this implementation in combination with the high-quality impact evaluation to determine how, why, and under what conditions the DP-2 best functions. Furthermore, it helps to explain failure (if observed) and helps the evaluation to distinguish failure because of poor design from that due to poor implementation.

The process evaluation is intended to take place mid-way through the project (January 2019) and will draw information from the baseline primary quantitative and qualitative research as well as primary qualitative data collection that will be specific to the process evaluation. Also, the process evaluation will rely on a range of secondary data including project documents as well as data collected as part of DP-2's M&E efforts and those of its implementing partners. The findings from this component of the evaluation will enable DP, the Fund Manager, and other stakeholders to understand changes in project design of implementation from DP-1 to 2, assess the extent to which implementation followed the design so as to test implementation failure versus theory failure, and provide lessons and recommendations on how to adjust project delivery in the final years of implementation.

2.3.3 VfM assessment methodology

The level of investment made by the DLA and GEC to implement DP-2 raises critical questions for the evaluation not just around whether the project has worked or not but whether it offers VfM when considering the impact achieved against the resources put in. For policymakers deciding how to use scarce resources, it is important to consider not only the quantum of impact expected from options but whether they will get the most impact possible with the resources available. The VfM assessment for this project will specifically focus on cost-effectiveness analysis, which is an incremental analysis that evaluates the difference (or increment) in costs and difference in outcomes between the intervention and the comparator. The VfM assessment will be conducted at endline (2020).⁷³

2.3.4 Target beneficiary groups for the evaluation

The target beneficiary groups for this evaluation are divided into five:

- **Marginalised girls in primary 5, 6, and 7/JSS-1 in the project schools:** DP-2 defines marginalised girls (and boys) as *‘those students with low economic development, limited educational resources, and low educational capacity.’* The selection of the DP schools was along the lines of this criteria, and thus all students in these schools are considered to be marginalised. The marginalised girls selected from the evaluation schools will make up the cohort sample used to track learning and transition outcomes. At midline, all cohort girls will be tracked only at the school level, thus verifying if they are currently enrolled or have left the school. At endline, we will track girls at both the school and household level, whether they are enrolled or have dropped out of school. Annex 14 provides further details on the cohort-tracking approach.
- **Marginalised boys:** This includes boys in the same schools in primary 5, 6, and 7/JSS-1 with a subgroup of boys taking part in boys’ clubs. Although the quantitative component evaluation focuses mainly on girls, the qualitative component has included some interviews with a few boys’ clubs.
- **Parents and community members:** The parents of each of the selected cohort of girls will be tracked and surveyed for the evaluation. Community members will also be interviewed through the qualitative component of the study, specifically targeting CAP members, village or community leaders, etc.
- **Teachers:** The evaluation will conduct classroom observations and semi-structured interviews with teachers and resource teachers, followed by KIIs with head teachers in a select number of schools. Teachers in treatment schools will specifically include those that have received DP-2 training, coaching, and mentorship.
- **MoE officials at the district and provincial levels:** Key MoE respondents who could speak to the sustainability of the project were selected in collaboration with DP country teams for KIIs.

2.3.5 Learning and transition cohort for the evaluation

The evaluation is tracking a joint sample for both learning and transition. The joint sample is made up of randomly selected girls in primary 5 from both treatment and control schools at baseline and are tracked

⁷³ Further details on the approach can be found in the inception report in Annex 6.

through the remainder of the evaluation, i.e. in primary 6 at midline and JSS-1 (or primary 7 in Kenya) at endline. If girls repeat a grade or drop out through the course of the evaluation, we will also track them at the respective grade level or if they drop out at the household level (but only at endline). The reason for

selecting a joint sample is because DP-2 specifically works with in-school children and, therefore, the cohort sample was specifically drawn from schools.

Box 4: Benchmarking for learning and transition

In accordance with the GEC-T MEL Guidance, a benchmark sample was identified for both learning and transition. For the learning benchmarking, learning assessments were administered to this benchmark sample in order to set learning targets for the upcoming evaluation points. Similarly, a household transition survey was administered to a separate sample of households in selected communities in the project target areas to set transition targets for the upcoming evaluation points. The cohort of girls that are being tracked for this evaluation are in primary 5 at baseline and are expected to progress to primary 6 by midline, and primary 7 (in Kenya) or JSS-1 (in Ghana and Nigeria) by endline. Therefore, learning and transition targets need to be set for primary 6 and primary 7/JSS-1, which constitute the benchmark grades.

Baseline	Midline (one year later)	Endline (two years later)
Project grades		
Primary 5	Primary 6	Primary 7 / JSS -1
Benchmark grades		
Primary 6	n/a	n/a
Primary 7 / JSS-1	n/a	n/a

Learning benchmark sampling approach: The sample of primary schools selected for the learning benchmarking is the same as the sample of treatment schools from which the cohort sample was drawn. In Ghana and Nigeria, JSS were identified for the sample of the JSS-1 benchmark grade. With the support of the DLA country teams we selected JSS that were in close proximity to the sampled primary schools and were the most likely schools that girls from the treatment primary schools would transfer to at the end of primary. All selected JSS were part of DP-2. In each country, in each of the 60 treatment schools, five girls were randomly selected from primary 6 and five girls from primary 7/JSS-1, for a total of 300 girls for each benchmark grade. These sampled girls completed the English literacy and numeracy assessments. Their scores on these assessments will be used as the basis for setting learning outcome targets at midline and endline. The sampling approach and achieved sample size are described in detail in Annex 10 and the target setting approach is described in Section 4.1.

Transition benchmark sampling approach: In collaboration with DLA country teams, 10 primary schools were selected from the pool of treatment schools that represented the diversity of schools/communities that DP-2 works in. In each of the school catchment areas, we employed a snowball sampling approach and surveyed 10 households per catchment area with female children within the ages of 11 to 15 years, for a total sample size of 100 benchmark transition households per country. See Annex 10 for further details on the sampling approach and achieved sample size.

2.3.6 Mixed-methods approach

The evaluation implements a mixed-methods approach combining both primary quantitative and qualitative data collection. We use a combination of various techniques to mix methods throughout the evaluation including the following:

- **Integrating methodologies for better measurement:** the evaluation matrix presented in Annex 6, Table 6, and Table 7 illustrates how various evaluation questions will be answered using a variety of quantitative and qualitative methods. Mixing will, therefore, occur during data collection, recognising that different elements of evaluation questions will be explored in more depth using qualitative tools, while others will rely solely on quantitative surveys.
- **Sequencing information for better analysis:** recognising that careful sequencing of quantitative and qualitative methods will allow each method to build upon the other. For example, our initial activities during the inception phase were qualitative, such as the construction of the ToC and pathways of change. These activities feed into the design of the quantitative surveys and ensure that the instruments are appropriately tailored to the specific context in each of the DP-2 countries. Later on, in each round of research, it is possible that the quantitative surveys will highlight some outliers, such as schools or students who show particularly low achievement rates or the opposite. Qualitative and in-depth scrutiny will then be developed to explore possible contextual factors that may explain these phenomena.
- **Merging findings for better action:** recognising that triangulating findings across multiple sources of information increases the confidence in the robustness of evaluation results as well as increases the understanding of the particular contexts and factors that lead to these results. In analysing the baseline, we have adopted an approach whereby both qualitative and quantitative analysis have been combined to provide context and evidence to support the conclusions and recommendations presented in this report.

The overall mixed-methods methodology for the baseline was a simultaneous quantitative-led mixed-methods design where qualitative data collection is nested within the quantitative sample and is aimed at answering a different set of evaluation questions. We ensured a diversity of views of respondents were obtained and triangulated across the methods and respondents throughout the data collection and generating a contextual understanding/explanation of the quantitative findings in regard to the qualitative sample of respondents. Our mixing design also ensures that the qualitative and quantitative strands work closely at the methodological stage when both have contributed and informed the development of data collection tools. Although the initial analysis of each strand happens separately, we ensure there is the necessary space for discussing and interrogating both sets of findings to integrate the inferences obtained from the qualitative and quantitative strands for developing the meta-inferences as part of the joint mixed-methods report.⁷⁴

2.3.7 Gender- and disability-sensitive approach

As per the GEC guidelines, the DP-2 evaluation calls for a gender- and disability-sensitive approach to the evaluation. To do this we will need to view the evaluation process, design, and the key elements of

⁷⁴ Tashakkori, A. and Teddlie, C. (2008) 'Quality inferences in mixed methods research', pp. 101–119 in Bergman, M. (Ed.) *Advances in Mixed Methods Research: Theories and Applications*. Sage, London.

each evaluation stage through both a ‘gender lens’ and ‘disability lens’ to ensure that the evaluation, associated data collection, and analysis practices are fully informed by an awareness of how gender and disability shape and are shaped by both DP-2 and its evaluation. As such, this evaluation has operationalised the ‘gender and disability lens’ at the baseline round through the following actions:

- **Design issues:** The baseline data collection tools were developed so that they considered the gender aspect of the content of the evaluation and included gender concerns across all tools. We also seek to understand specific local contextual gender and disability inequality factors affecting girls’ education in Nigeria, Kenya and Ghana; however, the design of tools was done in a way that they did not make any biased assumptions or were premised on a specific way of thinking and judging wrong and right in regard to gender. Instead, our tools are neutral, and some are explorative and serve for collecting ‘gendered’ data from a range of respondents. We note that in our view the DP sustainability framework would benefit from being more ‘gendered’ as the community and school-level aspects do not have sufficient gender content.
- **Implementation issues:** although our evaluation design was gender- and disability-sensitive, the realities of project implementation meant that the envisioned design did not work in regard to the disability aspect. We have not come across any ‘disabled’ respondent in our data collection and we recognise that disabled respondents are hard to reach, especially in the case of children studying at school. This could pose a challenge for the follow-up rounds of data collection given the longitudinal panel nature of the study.
- All country teams of researchers had female and male researchers to ensure both genders were represented but also to be able to respond to any contextual demands while collecting data across the countries. The qualitative researchers had a reflexivity session as part of their training on revealing and interrogating personal biases and situations to mitigate their possible manifestation during the data collection. All quantitative and qualitative researchers also had a special session on the code of conduct to prevent any situations that could endanger our gender- and disability-sensitive design.
- Our approach to data analysis follows both deductive and inductive analysis, in that we had a pre-developed coding framework with embedded gendered aspects but also remained open to exploring new dimensions of gendered practices in relation to girls’ education.
- **Intensity:** The DP-2 design may reflect gender- or disability-sensitive approaches, but activities may not have been sufficiently long or frequent enough to effect the desired changes, which will be explored through the qualitative research; and
- **Participation:** For disability, in particular, we included a short module in the quantitative survey at household and girl level using the Washington Group disability questions,⁷⁵ specifically designed for identifying a range of disabilities in children. The qualitative data collection tools were all inclusive and engaged boys and girls attending school clubs and the girls’ parents, most of whom were mothers. More girls participated in the data collection than boys given the resource restrictions in all three countries but also the primary focus of the evaluation. To allow for mothers’ participation in the household interviews in Nigeria, special permissions were obtained from the community chiefs. We did not have any control over selecting head teachers, DP-

⁷⁵ www.washingtongroup-disability.com/

resources teachers, and DP-trained teachers since we followed specific details of sampling these respondents. Similarly, MoE representatives were identified by DP country officers and therefore we could not ensure any gendered representation at that level. When choosing community members, we faced further restrictions since community leaders tend to be men rather than women, although this factor was addressed somewhat by us enrolling female community members in our group interviews to the extent possible in each context.

2.4 Baseline data collection process

In this section, we outline the baseline quantitative and qualitative data collection process. We provide details on the sampling strategy and sample size (2.4.1), instrument design (2.4.3), cohort-tracking approach (2.4.4), piloting and training for baseline (2.4.6), baseline fieldwork and quality assurance (2.4.7), research ethics (2.4.5), and data cleaning and analysis (2.4.8).

2.4.1 Quantitative sampling strategy and sample size

The impact evaluation is designed to provide a representative sample of project schools to enable a country-level analysis of impact, i.e. the samples will not be representative of the country as a whole but only of the targeted intervention areas, specifically Ghana's northern region, Kano State in Nigeria, greater Nairobi schools in and around the city's informal settlements, and the counties of Wajir, Machakos, and Kajiado in Kenya.

Taking into account the DP-2 implementation approach,⁷⁶ we employed a multi-stage cluster random assignment strategy, which considers schools as the **Primary Sampling Unit (PSU)**, from which teachers and students were randomly selected to be part of the evaluation sample. A master sampling frame was constructed using Education Management Information System (EMIS) data for each country (which includes all schools in the evaluation areas including both treatment and potential control schools) and the list of all DP-2 intervention schools.⁷⁷

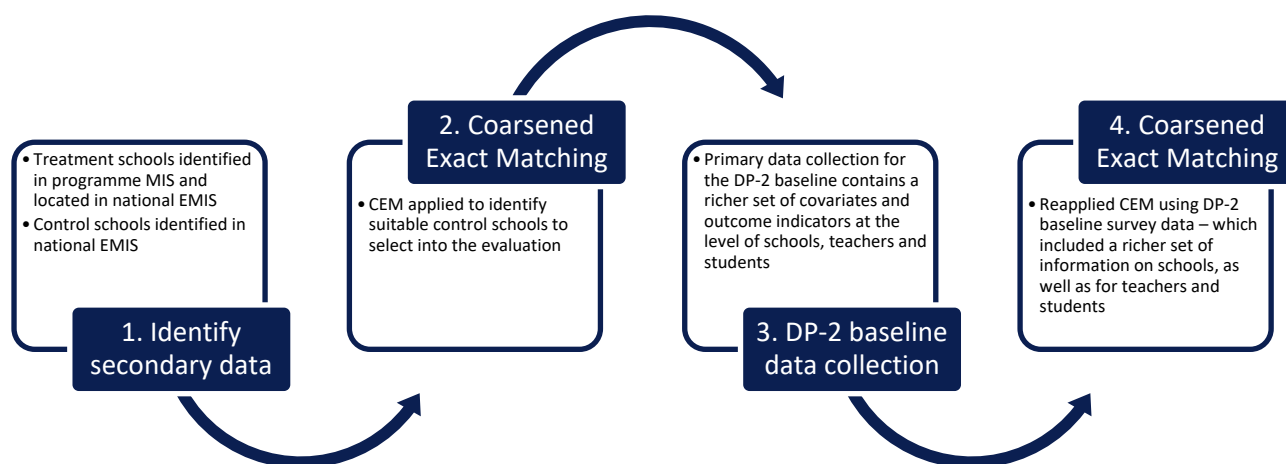
Given that treatment and control schools were not randomly assigned for DP-2, we expect there to be systematic differences between the average treatment and average control school. To improve the chances of identifying a set of control schools that can form an appropriate counterfactual, our random selection of control schools was bolstered by matching using the CEM approach.

Figure 6 presents the steps taken to reach a balanced sample for this evaluation.

⁷⁶ DP-2 implementation prior to this evaluation purposively selected intervention schools on the basis of geographic proximity and the necessary local MoE support structures.

⁷⁷ The master sampling frame was refined further by taking into account 'zones of exclusion' around treatment schools to avoid the potential for spill-over effects by mapping out schools that were receiving 'other GEC-T interventions' and 'other GEC-T programme control schools'.

Figure 6: Steps to defining a balanced sample



To implement this, we used CEM to match treatment and control schools on a set of indicators available in the EMIS data. Treatment and control schools were then randomly selected in pairs, with each pair of schools having a broadly similar set of characteristics based on CEM. This approach was necessary to greatly reduce the chances of selecting control schools into the evaluation sample that would have to be dropped during the analysis stage because of significant statistical dissimilarities with all treatment schools in the evaluation sample. Using this approach the final sample of schools, teachers, and children for the evaluation were selected.⁷⁸

Sample size and power

Table 8 presents our target sample size for this evaluation. Following the GEC-T MEL guidance, we set Intra-Cluster Correlation (ICC) to 0.1, significance levels to 5%, and power to 80%. We also introduced the inter-temporal correlation into the sample size calculation to account for a panel or longitudinal approach of the survey, which we set to 0.5 based on previous experience of similar surveys. These calculations delivered a target sample size of 120 schools and 1,800 girls per country with a Minimum Detectable Effect (MDE)⁷⁹ of 10 percentage points for transition⁸⁰ and 0.247 standard deviations for learning. To account for attrition over the course of the evaluation, taking into account the guidelines provided by the Fund Manager and data provided by DP on the DP-1 attrition rates, we applied a 30% and 40% sample attrition rate for Ghana/Nigeria and Kenya respectively, resulting in an overall sample size of 120 schools and 2,400 girls in Ghana and Nigeria and 2,520 girls in Kenya.⁸¹

⁷⁸ See Annex 6 for further details

⁷⁹ An MDE defines the minimum impact of DP-2 that a given sample size will deliver. Annex 6 provides further details on our approach to calculating MDE.

⁸⁰ As per the GEC-T MEL Guidance, since the target for transition will be determined by each programme after the baseline, 10% was suggested as a reference point to calculate an initial sample size.

⁸¹ See Annex 10 for the final DP-2 evaluation sample for each of the three countries achieved at baseline.

Table 8: Evaluation sample size per country

	Target sample size per country		Sample size accounting for 30% attrition for Ghana/Nigeria and 40% for Kenya		MDE post-attrition	
	Schools	Girls	Schools	Girls	Learning	Transition
Total sample size: Ghana, Kenya, Nigeria						
Treatment	60	900	60	1,200 (1,260)	0.247	10%
Control	60	900	60	1,200 (1,260)		
Total	120	1800	120	2,400 (2,520)		
Sample size per Strata: Kenya						
Treatment	20	300	20	420	0.434	17%
Control	20	300	20	420		
Total	40	600	40	840		

Table 8 also delivers the MDE for each of the three strata in Kenya. Each stratum delivers an MDE of 17 percentage points for transition and 0.434 standard deviations for learning. These are higher than the expected MDEs for the total sample size per country.⁸²

2.4.2 Qualitative sampling strategy

The qualitative data collection applied a sequential nested mixed-methods sampling approach for the baseline data collection. In particular, the qualitative sample followed the quantitative sample when information from the quantitative sample was required to draw the qualitative sample of schools and girls.⁸³ In particular, the qualitative team, with the help of DP, selected a small number of cases to study intensively the combination of both purposeful and random sampling. Such a mixed-methods sampling approach is aimed at generating complementary databases that have both depth and breadth regarding DP-2.⁸⁴ Figure 7 illustrates how the qualitative sampling was conducted across the three countries. Sampling took place at three levels: school, community, and system level. The selection of the target LGAs in Nigeria, countries in Kenya, and districts in Ghana for the qualitative research was linked to the selection of schools from the overall quantitative sample. Six schools in each country were selected by the DP country teams using the following criteria outlined by the qualitative team: i) best performing DP-2

⁸² A potential implication of this is that the evaluation will detect impact at country level but fail to detect impact at the level of the strata. We propose a number of mitigating responses for this, including: (1) tracking heterogeneity in implementation across strata through the process evaluation; (2) tracking perceptions of heterogeneity in impact across strata through the qualitative research; and (3) considering other ways to boost power.

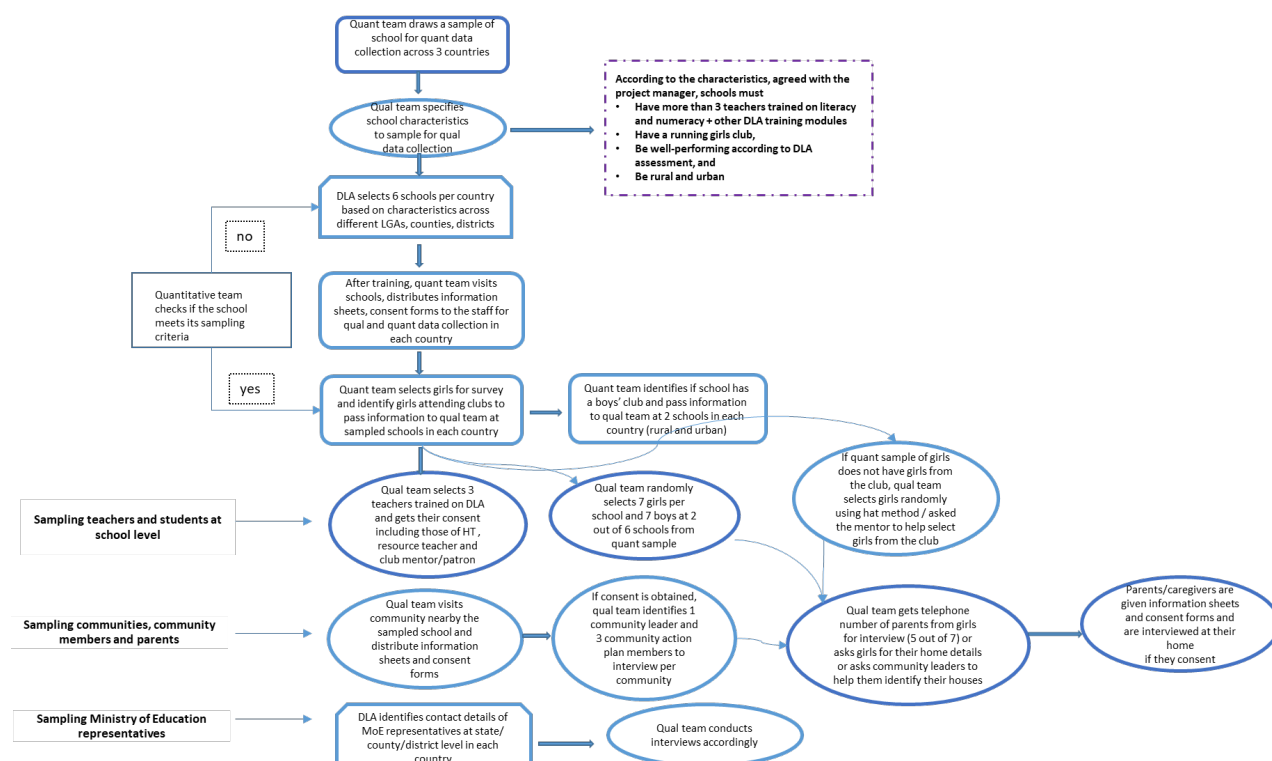
⁸³ An example includes a study where the team generated six strata based on two dimensions (three levels of community type crossed by two levels of implementation of innovation). Their final sample had only six schools in it (one purposively selected school per stratum): one 'typical' urban, one 'typical' suburban, one 'typical' rural, one 'better' urban, one 'better' suburban, and one 'better' rural. For further details, see Teddlie, C and Yu, F. (2007) 'Mixed Methods Sampling: A Typology With Examples', *Journal of Mixed Methods Research* 1: 77–100.

⁸⁴ Teddlie and Yu (2007).

school according to the DP’s assessment; ii) availability of a minimum of three teachers who received DP-2 literacy and numeracy and/or any another DP-2 training modules (i.e. Intensive Teacher Training, Gender-Responsive Pedagogy, etc.); iii) a mix of urban and rural schools; and iv) schools with a functioning girls’ club (a functioning boys’ club was a bonus but not a necessary condition).

The DP country teams determined “Best- performing schools” on a case-by-case basis, using primarily the factors of teachers that performed well in classroom observations (i.e. were observed using DP-taught methods), had active school management committees, had clubs engaged in activities, and that had demonstrated good implementation of the CAPs. These assessments were made at the country level based on both performance in DP-2 as well as historical performance from DP1.

Figure 7: Qualitative sampling approach



The sampling approach followed at the school, household, and community level for both quantitative and qualitative instruments at baseline and the total sample size achieved per instrument by country are summarised in Annex 10.

2.4.3 Instrument design

The evaluation utilises a set of quantitative and qualitative tools to capture data on the key impact and intermediate outcome indicators. There are five quantitative instruments for this evaluation: the *school*

survey, headcount, classroom observation, girls' survey, and household survey. The qualitative tools involve two main types of data collection method: semi-structured individuals and group interviews added to two interactive activities with children (nine in total). Tools included semi-structured interviews with: *head teachers together with DP resource teachers; girls' club mentors/patrons; DP-trained teachers; parents of the cohort girls; community leaders; and community members involved in CAP; and finally rich picture exercises with girls' and boys' and girls' diaries.*

Quantitative and qualitative tools were designed using the following approaches:

- **Adapted from the DP-1 evaluation:** The school survey, headcount tool, and cohort attendance module were adapted from the previous DP-1 evaluation.
- **Adapted from GEC-T:** The household and girls' survey tools were provided by the Fund Manager. We undertook a review of the tools against the DP-2 evaluation matrix, the GEC reporting requirements, and each of the country contexts to determine the questions to retain, adapt, and remove.
- **Adapted from the self-efficacy scale:** The 10-point GSE scale was developed by Schwarzer and Jerusalem in 1995 and was originally published in Weinman *et al.*'s *Measures in Health Psychology: A user's Portfolio* (pp. 35–37). Other questions relating to self-efficacy, life skills, decision making, and feelings and attitudes (that comprised the girl module) were adapted from the DP-1 evaluation and from the 2013/14 Young Lives Child Questionnaire for the younger cohort in Ethiopia.
- **Designed a new tool for the DP-2 evaluation:** The classroom observation tool was designed by Oxford Policy Management's (OPM) education team to capture information about the three foci of the project: student-centred, gender-responsive and interactive pedagogy; use of video/media; and numeracy and literacy pedagogy. Multiple draft versions of the tool were shared and discussed with the DP team and revised accordingly. The EGRA/EGMA and SeGMA/SeGRA were designed following Research Triangle Institute and Fund Manager guidance, respectively. We worked closely with the MoE and DP country teams in each country to obtain the curricula and textbooks of students for the respective grades of the assessments (i.e. primary 5, 6, and 7/JSS-1). We also recruited and hired local education experts in each of the three countries to help develop passages and questions for specific subtasks of the learning assessments. Our education expert for the DP-2 evaluation worked with the curriculum/textbooks and the local education experts to design the three sets of tests for EGRA, EGMA, SeGMA, and SeGRA in line with the guidance provided for the GEC-T.
- **In line with the evaluation questions and DP-2 ToC:** Qualitative data collection instruments were developed in line with the evaluation questions and matrix suggested in the inception report (see Annex 6.) The tools were used as conceptual and methodological frameworks in developing each question for a range of respondents and were in line with the project ToC. Given that the current ToC does not suggest a full list of causal link assumptions and contextual factors, we therefore referred to the existing literature to ensure our questions were relevant.
- **The interactive tools for children were developed** based on our assumptions of the children's interest and skills that would be most suitable for the age category of our respondents to express

their views. We do not consider drawings as reproductions of reality but we value these pieces of work as a semiotic vehicle to create and convey messages during the drawing process.⁸⁵ In so doing, however, we recognise the varying contexts across our countries and how local factors such as social and cultural contexts can affect our research outcomes. We are aware of four key factors to be considered when using young children's drawings: (i) contextual sensitivity of the drawing process when children surrounded by adults on school premises are asked to draw; (ii) children's perceptions of the research task given that we are 'outsiders' to them who they are meeting for the first time; (iii) the complex task of representing an abstract and elusive concept such as drawing an imaginary girl or a boy at school; and (iv) whether there is a fundamental difference between drawing spontaneously (non-commissioned) and drawing on request.

- **Paper diaries were developed as one of the means to encourage children to tell us about their own life** by keeping a diary for two weeks. Diaries are especially useful to explore children's use of time and understanding of their routine activities. However, we are aware from the literature that, for some children, diaries can remind them of a type of school work, while for others it might be a valuable form of communication. A difficulty might be ensuring confidentiality for diary extracts in both the school setting (where teachers and peers may put pressure on the child to participate) and at home (where parents and other siblings may check the child's diary or even write their own entries).⁸⁶ Every effort was made to make sure that diaries are easy to use and do not cause any difficulties for children. When designing the tool and thinking through the ways of administering it, some trade-off were set off against others to choose the best medium balancing the pros and cons of different scenarios.

We shared all draft versions of the tools with the Fund Manager and DP for comments and revised them accordingly. All quantitative tools were pre-tested before the baseline data collection and were refined further across several rounds. Qualitative tools were first discussed in detail with the local researchers against the contextual realities and then simulated by the team in the training environment. After having been revised the tools were then piloted in the school setting with all school-level respondents including children, as well as with community members and parents at the community level. We tested two versions of diaries including the original one and a simplified version and the latter was chosen for the fieldwork.⁸⁷

Annex 7 provides descriptions of each of the quantitative and qualitative tools and the final tools used for the baseline evaluation.

2.4.4 Cohort tracking

Cohort tracking involves tracking the same girl respondents throughout the evaluation. At baseline, we captured sufficient information about the sampled girls and their households to enable us to track them at different points in the evaluation. This includes the full name of the girl and parent/guardian, age and current grade of the cohort girl, phone numbers of caregiver and head of household and other people that

⁸⁵ Kress, G. and van Leeuwen, T. (1996) *Reading Images: The Grammar of Visual Design*. Routledge, London.

⁸⁶ Barker, J. and Weller, S. (2003) "Is it Fun?" Developing Children Centred Research Methods'. *International Journal of Sociology and Social Policy* 23(1/2): 33–58.

⁸⁷ We note that the data collected for the pilot purposes was not used as part of the official data set.

might know about the cohort girl's whereabouts within a three-year period, and community name, address, GPS locations⁸⁸ of the cohort girl's household, and any nearby landmarks.

We will verify the presence of the girl in the sampled schools and the location and contact information of her household at midline during the school-level data collection as there will be no household-level data collection at midline. At endline, the cohort-tracking protocol will vary by country. In Nigeria and Ghana, the cohort girls will be transitioning to JSS-1 in their seventh year of education. Therefore, between midline and endline, the majority of the girls are likely to transition to a new school if the JSS is not attached to the primary school, which poses additional challenges for tracking the cohort of sampled girls. Therefore, in both these countries, we are proposing to start by conducting cohort tracking at the household level during the endline evaluation before tracking at the school level to ensure that we are able to identify the maximum number of respondents from our learning cohort during the household visit. For Kenya, since cohort girls will be transitioning to primary 7 and thus staying within the same school, for the most part, we will assess closer to the time whether to conduct the household survey first (to align with the approach for Ghana and Nigeria) or to maintain the baseline approach and conduct the school-based survey first.

In Annex 14, we have outlined our detailed cohort-tracking protocol for each phase of the evaluation. This protocol will be adapted during the course of the evaluation, as additional guidance from GEC becomes available and based on learnings from the initial rounds of data collection.

2.4.5 Research ethics

Conducting evaluations of this nature requires high ethical standards to ensure confidentiality is maintained, that respondents are never forced to participate or encouraged to speak about subjects that may be traumatising, and that all activities are age appropriate. Ethical considerations have been taken into account throughout the entire evaluation process, including evaluation design, composition, recruitment and management of the evaluation team, consultations and interviews with informants, and data storage and use.

The evaluation design, instruments, information sheets, consent forms, and fieldwork protocols underwent a formal approval process with **OPM's Ethical Review Committee**. Furthermore, local ethical approval was sought in each of the three countries prior to the baseline commencing.⁸⁹ All evaluation and field staff were required to undertake a criminal clearance check prior to joining the team and were over the age of 18. All evaluation team members underwent ethics and safeguarding policy and practice training before the start of fieldwork. The training covered topics such as the rights of participants, how to obtain informed consent and assent from respondents, how to enter the community and school, general researcher codes of conduct, and procedures for ensuring the safeguarding of children and other vulnerable groups to protect them from any harm.

In addition to ensuring this evaluation adopts the highest ethical standards in particular when consulting with children, OPM put in place specific child protection measures to ensure our research team and local partners understand their ethical and statutory responsibilities when it comes to protecting children from

⁸⁸ Although note that Section 2.5 outlines some challenges in terms of establishing GPS locations for some households.

⁸⁹ See Annex 6 for our detailed ethics approach for this evaluation.

harm. The entire evaluation team, partners, and DP country teams were trained on the child protection policy and procedures for the DP-2 evaluation, so they know what action to take if any child we come into contact with during the evaluation discloses an incidence of abuse, violence, exploitation, or neglect. Annex 16 provides further details of the DP-2 Child Protection Framework for each country.

2.4.6 Piloting and training

Our local data collection partners – Research Guide Africa (RGA) in Kenya, TNS RMS in Ghana, and OPM in Nigeria – conducted recruitment of field staff for this evaluation for both qualitative and quantitative data collection in each of the countries. Given the size of the data collection work and complexity of the tools and protocols and procedures, the quantitative field team was composed of supervisors, enumerators, classroom observers, and quality assurance staff. For the qualitative work, we divided the research team into two teams, each comprising a team leader and four national qualitative researchers. Each team was further divided into two sub-teams, consisting of one facilitator and one note-taker for each research tool administered. One of the teams had a second researcher from OPM. All teams consisted of a mix of male and female researchers to address any cultural concerns in all countries (e.g. especially the household interviews in northern Nigeria). When selecting researchers, special attention was paid to their previous experience of conducting similar qualitative research studies and the languages they spoke, i.e. Kiswahili and English, Somali for research in Wajir, Dagbani, Gonja, and Twi in Ghana, and Hausa in Nigeria.⁹⁰ For the quantitative exercise we had a total of 60–80 field staff, whereas for the qualitative work there was eight field staff per country.

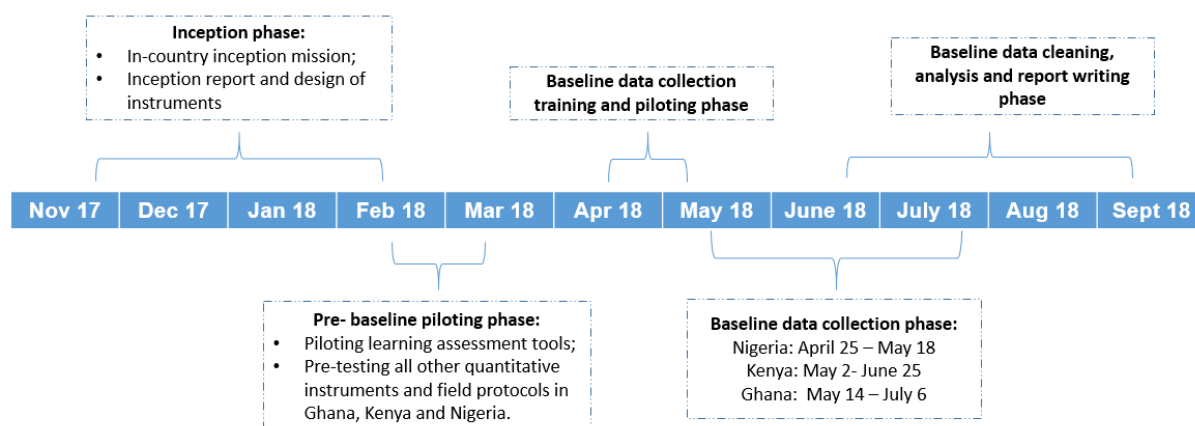
Prior to the baseline data collection, a pilot exercise was undertaken to test the different versions of the learning assessment instruments and use the pilot data to calibrate and adapt the assessments to the context in each country to avoid flooring and ceiling effects (further details of the learning assessment piloting report can be found in Annex 9). We also used this opportunity to pilot test the draft quantitative instrument and field protocols. This initial exercise took place in late March and early April 2018, starting in Kenya followed by Nigeria then Ghana. We selected the pilot schools in collaboration with DP country teams, and the main criteria for selection were to ensure schools were somewhat representative of the types of schools the project works in and to ensure a mix of students with varying capabilities (i.e. rural versus urban, regular versus religious, etc.).

Training for the baseline started in Nigeria, followed by Kenya then Ghana – see Figure 8 for the full timeline. We conducted the training in two parts: (i) quantitative; and (ii) qualitative training. The quantitative training took place over five days followed by two days of piloting and one day of debriefing in each country. Similarly, the qualitative training took place over four days followed by one day of piloting and a one-day debrief in each country. The training was led and conducted by OPM staff responsible for the quantitative and qualitative component of the study and the respective country. Training was classroom-based with presentations, and interactive exercises and emphasis was placed on the team understanding the project and the research tools. In particular, the training focused on an introduction to the study, data collection instruments, field protocols, research ethics and child protection training, and practice of tools. Practical sessions helped researchers gain familiarity with the tools. Pre-and post-tests

⁹⁰ See Annex 15 for the level of qualification for each position and responsibilities for the quantitative and qualitative team.

were given to the field staff during the training period to measure how much they understood the content of the training and the field protocols.

Figure 8: DP-2 baseline evaluation timeline



Following the training, the entire field team piloted the instruments and protocols in about 10 primary schools (and 6–8 JSS in Ghana and Nigeria), of which four primary schools and their surrounding communities were selected for the qualitative piloting. We conducted daily debriefs with the team to ensure all team members were provided with feedback and felt confident before the research began, while we also undertook re-training of enumerators and researchers that did not perform well. Piloting of the tools was used to check the content and meaning of each tool, the length, and logistics in relation to implementing the tools at the school and community. We also tested our entry protocols as well as the research teams’ work patterns and personal strengths and weaknesses of the researchers. Since the fieldwork started in Nigeria, the revised tools were later revised in Kenya to allow any adjustments to the Kenyan context and re-used in Ghana after being adjusted to the Ghanaian context.

2.4.7 Baseline fieldwork

The baseline data collection took a staggered approach, with Nigeria being the first country to start followed by Kenya and then Ghana. The reason for this approach was due to the different start date for the school term in each of the countries.⁹¹ Figure 8 presents the data collection timeline for each country. Below we discuss the quantitative and qualitative fieldwork across the three countries.

⁹¹ Schools opened for Term 3 on 23 April and 7 May 2018 in Nigeria and Ghana, respectively. In Kenya, schools opened for Term 2 on 30 April 2018.

Quantitative fieldwork

The quantitative data collection teams ranged from eight to 10 teams per country comprising about six to eight members per team. Each team member was responsible for a specific set of tools. For instance, the classroom observers were responsible for conducting only the classroom observations and administering and marking the SeGRA and SeGMA assessments, while supervisors were responsible for conducting the school survey, headcount, and cohort attendance and enumerators were responsible for administering the learning assessment (i.e. EGRA and EGMA), the girls' survey, and household survey. We had a separate quality assurance team comprising three to five individuals per country that were responsible for conducting daily checks on the field team to monitor the data collection process, protocols, and procedures. Daily debriefs were conducted at the end of the field day with the teams at specified locations. Live data checks were conducted throughout the data collection by the OPM surveys team using an interactive dashboard created using Power Bi software to monitor information such as the number of surveys completed by the team and by the enumerator, completeness checks, random checks of key variables of interest, duplicate IDs, incorrect entries, etc.

Qualitative fieldwork

The qualitative data collection started one week after the start of the quantitative data collection to allow the quantitative data to be gathered for the selected qualitative schools to inform the sample selection. Data collection took place in six schools and their surrounding communities in each country. The schools for the qualitative study were selected in consultation with DP as discussed in the qualitative sampling section above, i.e. (i) best performing DP-2 school; ii) availability of a minimum of three teachers who received DP literacy and numeracy and/or other DP training; iii) a mix of urban and rural schools; and iv) schools with functioning girls' clubs.

Each interview and discussion had a lead facilitator and a note-taker. Note-takers were taught how to take specific types of notes and provided with a note-taking form for each tool. Interviews and discussions were conducted mostly in local languages and translated into English. The division of tasks among researchers, i.e. note-taking and facilitating/conducting interviews as well as conducting activities with children, was based on the skills and competencies of researchers. To ensure consistency in data collection and synthesis of the qualitative data, the same team of researchers worked with the same type of tools and respondents across the research sites. This approach ensured that the teams were making rapid and consistent progress in mastering a specific tool and were able to generate a full analytical set of data per type of respondent and therefore were able to compare and contrast data across schools and communities as well as respondents.

Notes collated during the interviews and discussions were used to facilitate team debriefs, as well as provide a back-up source of information should the audio recordings be unclear or if we were unable to record an interview (e.g. due to respondents' preferences or if the recording device failed). Daily debrief sessions were held to discuss fieldwork and provide an initial synthesis of the findings. These sessions were a key stage of the analysis and were used to reveal research gaps to address during the fieldwork and generate an evidence-based analytical synthesis of findings per day per location. In particular, the debrief was a mechanism to think about the team's performance, the effectiveness of the tools, and how each data collection tool added to the overall understanding of the evaluation questions. As a result, the teams were able to consolidate all the findings generated each day and conduct initial analysis for a

particular school and community. Daily debriefs followed a special framework as a means for brainstorming and triangulating sources, methods, and respondents, enabling us to challenge one another and serving as a quality assurance mechanism in which technical queries that arose during the day were addressed. The debrief sessions marked the start of building a narrative around findings, discussing emerging themes, and identifying additional areas to explore throughout the fieldwork. The data collection was followed by two days of debriefing and analysis in each country to allow the teams to develop country-based debriefs, complete school and community debriefs, and finish typing up all the instrument notes. The completion of the qualitative data collection was followed by the transcription of data recorded during the interviews and discussions.

Administering girls' paper diaries required extra care and resources. In particular, the idea was to buy basic copybooks that were most typical for each country so as not to draw the attention of other children not involved in the exercise. The instructions for the diaries were first given after the rich picture exercise when children made their first entries of data together with the researchers. Two weeks of diary keeping required sending children regular reminders, which we did by ringing their parents and asking them to encourage their children to fill in their diaries. We were aware that this exercise could pose certain risks, e.g. siblings could fill in the diaries instead of our cohort of girls, instructions from parents would be perceived by children as obligatory rather than encouragement and result in the children having to enter anything for the sake of following the parents' instructions, etc. Therefore, reminding the child was most optimal. After the two weeks, the diaries were collected by the members of quantitative teams in each country.

Annex 15 gives fuller details of the baseline quality assurance approach.

2.4.8 Data cleaning and analysis

For the quantitative data, while data checking and cleaning were run concurrently with the data collection, we performed additional data processing activities once data collection was complete to transform the collected cleaned data into a format ready for analysis. This involved reshaping and integrating datasets for different levels of analysis, classifying non-response and coding, properly naming, and labelling variables in each dataset, calculating weights, and anonymising data by removing all variables that identify respondents such as names, addresses, GPS coordinates, etc.

Similar to the quantitative approach, data checking took place alongside data collection of the qualitative work. The collected data (audio and notes) were treated according to the required ethical standards, especially concerning anonymity and data security. Names and personal identifiers have been excluded from any written notes and transcripts, and data is stored and referenced using appropriate unique identifiers. The registries with personal details and major identifiers are kept password protected and will be used in the follow-up rounds of data collection to identify the baseline respondents.

The qualitative data gathered were transcribed and translated by different teams of transcribers to those who actually gathered the data and this was done during the fieldwork. All transcribers were provided with a background on the project, fieldwork data, and context. Transcribers were also supplied with transcription and translation guidelines and had individual training sessions with the OPM qualitative team lead. They were given specific instructions for the type of transcriptions we required for this particular

study. We also developed the template for transcriptions that was followed in all three countries. Transcripts were quality assured by the lead local researcher in the countries, and a sample was randomly checked by the OPM qualitative researcher. Local researchers who had any data stored on their equipment in one way or another were asked to destroy the data after the fieldwork was completed. As part of data management, a clear file-naming system was developed and followed in each country for all documents as well as artefacts to be catalogued and stored. We also created a system for labelling and storing consent forms that includes a unique name or case identifier for each file. These are now stored using Dropbox and secured with passwords.

Quantitative data analysis

Various methods were used for the quantitative data analysis. In most parts of the report, descriptive and summary statistics were used to create indicators at the output and impact outcome level. Subgroup analysis was done using these statistics, which included breakdowns by age group, region, girls' characteristics, barriers to learning, transition, disability, and treatment status. When comparisons were made between treatment and control groups, a t-test was run to check for statistically significant differences at the 10%, 5%, and 1% level.

In different sections of the quantitative analysis, various other methods were used. In the section on learning, a multivariate Ordinary Least Squares regression was used to analyse the relationship between different barriers and the aggregate literacy and numeracy scores. Univariate probit regressions were used to identify significant correlations in teaching methods. Two dependent variables were used in these and the correlation between each of them and a set of explanatory variables was analysed. The first dependent variable was a binary that expressed whether or not a condition relating to teaching methods was observed and the second indicated whether the condition was met to a high standard. For the literacy and numeracy methods sections, these regressions were used to assess whether each teaching method was more likely when the topics to which they were best suited were being taught. A final quantitative method was used in the construction of the self-efficacy score. This was done by creating a composite score comprising responses to a series of statements, using factor analysis.

Qualitative data analysis

The qualitative analysis is largely thematic and combines a technique of inductive but largely deductive analysis. Thematic analysis is a search for themes that emerge as being important to the description of the phenomenon.⁹² The process involves the identification of themes through 'careful reading and re-reading of the data'.⁹³ It is a form of pattern recognition within the data, where emerging themes become the categories for analysis which is then conducted via a stage-by-stage process of iterative analysis from generic to specific, from respondents to respondents, from tool to tool, and from description to analytical. The first stage of analysis took place during debriefs in the field based on the tools conducted daily. Debriefs provided an opportunity for the research team to summarise initial themes identified during data

⁹² Daly, J et al. (1997) 'Demonstrating Rigor Using Thematic Analysis: A Hybrid Approach of Inductive and Deductive Coding and Theme Development'. Accessed on 13 June 2018 from <http://journals.sagepub.com/doi/full/10.1177/160940690600500107>

⁹³ Rice and Ezzy (1999), *Qualitative research methods: A health focus*. Melbourne: Oxford University Press, p. 258.

collection as well as triangulate and compare findings across the respondents, schools, and communities visited.

The second stage of analysis was based on the individual notes of each of the tools implemented as well as the debrief notes from each community, school, and country. These notes were coded and analysed using qualitative analysis software (QSR NVivo 11) following the thematic analysis logic. An initial codebook of themes was developed based on the evaluation questions and literature review to ensure consistency across the country data sets. To ensure contextual differences were incorporated, each team was also free to change the codebook to allow the themes to emerge from the data without the restraint of imposing pre-conceived concepts or bias on the data to test hypotheses or assumptions (deductive analysis). Findings were being considered both within each school and its surrounding community as well as through common themes across all the areas visited in each country. Our data analysis aims to show how overarching themes are supported by excerpts from the raw data to ensure data interpretation remains directly linked to the words of the respondents. Our principle is that people differ in their understanding and experience of DP-2 and that they cannot be understood outside the context they are in.

The third stage of analysis focused on identifying recurrent themes, noticing patterns, identifying respondent clusters and causal links, if any, as well as analysing why we have the patterns, themes, and clusters as they are and what that means for our evaluation questions. Thus, our analysis moved from descriptive to analytical findings and was further developed into inferences to contribute to the meta-inferences of the mixed-methods report.

2.5 Challenges in baseline data collection and limitations of the evaluation design

Challenges in baseline data collection

In Table 9, we outline some of the challenges encountered during both the quantitative and qualitative data collection activities across the three countries.

Table 9: Challenges in baseline data collection

Challenges	Mitigation approaches
Quantitative challenges	
<p>Insufficient number of girls in primary 5 and potential bias since small schools have been excluded: Attaining 20/21 girls per school is a big challenge across the majority of school in the three countries. In some schools, enrolment number for girls in primary 5 were very low and in other cases although</p>	<p>We took the following approaches to mitigate this: (1) Calling schools ahead of our visit to check on enrolment numbers and encouraging students to come to school on the day of our visit; (2) For schools where the number of girls enrolled in primary 5 was less than 20 we accepted schools with a minimum of 13–15 girls and oversampled in other schools to make up the difference; (3) For schools with less than the minimum</p>

Challenges	Mitigation approaches
<p>more than 20/21 girls were enrolled they were not in attendance during the date of our visit.</p>	<p>number of girls we replaced the school with other schools with sufficient number of girls; and (4) In certain areas in Wajir and non-formal schools in Kenya, Savelugu, Tolon, Central Gonja and East Gonja districts in Ghana, and all LGAs in Kano State we were not able to find replacement schools and therefore had to include schools with much smaller numbers of girls.</p>
<p>No primary 6 grade: Some of the selected primary schools (both treatment and control), particularly in Nigeria, did not have primary 6 grades, as most of the girls usually sit for the JSS exams in primary 5 and transfer to JSS.</p>	<p>Given that the cohort girls will be tracked from primary 5 to 6 and 7/JSS-1, we needed to ensure that schools selected for the evaluation in both treatment and control have a primary 6 grade to ensure that at midline we are able to track the transition of the girls into primary 6. Therefore, all schools with no primary 6 grade were excluded and replaced.</p>
<p>Matching treatment and control schools using EMIS data: In the construction of the master sampling frame, we merged together the EMIS data with the list of all the DP-2 treatment schools. Due to differences in the spelling of some school names across both datasets (i.e. EMIS and DP-2 full school list), we had to manually match the names of the DP-2 schools with the EMIS dataset. This process proved to be difficult as not every school in the DP-2 list matched the EMIS data list of schools and some matches were not perfect. This did result in delays in the fieldwork and some disruption of the field visits as some schools were incorrectly designated the wrong assignment.</p>	<p>We worked with the DP-2 country teams to resolve the issues of mismatches to avoid issues of visiting schools that matched incorrectly as treatment and control. Nonetheless, delays in the field were inevitable as a result of this problem and resulted in the extension of the fieldwork in some cases by a few days and in others by a week or two.</p>
<p>The onset of Ramadan during the start of fieldwork.</p>	<p>In Nigeria, we increased the number of teams to complete the data collection work before the start of Ramadan. As schools opened for the term early in Nigeria, this approach was possible. In Ghana, since schools opened up a week before Ramadan, we had to undertake fieldwork during the fasting period. This reduced the productivity of the team since schools were not open full days and, in most cases, we were not able to run any school-level activities on Fridays. Fieldwork had to be extended by one to two weeks to catch up after these delays.</p>
<p>Disruption of the school day given the length of the data collection exercise: The number of tools being employed for this evaluation is extensive and this has</p>	<p>We, unfortunately, did not have any mitigation approaches for this challenge since we were required to complete the data collection within a certain time period. We ensured that we informed schools ahead of</p>

Challenges	Mitigation approaches
<p>resulted in disruption of the school teaching and learning process.</p>	<p>time of our activities and the length of time this would take to complete. We received positive cooperation from most schools but in some schools (particularly control schools) this proved to be challenging.</p>
<p>Tracking of households: Tracking of households has been challenging in urban areas, particularly in Nairobi.</p>	<p>In Nairobi, additional smaller mop-up teams have been trained on the household survey and will assist the teams with completing the household surveys. In the other countries, the household data collection team have been working with schools and community leaders to locate households.</p>
<p>Additional learning benchmarking activities for P6 and P7, as well as transition benchmarking, were introduced after the start of fieldwork.</p>	<p>The additional learning benchmarking in P6 and P7 have been integrated into the ongoing fieldwork. These additional activities add additional time to the school-based activities, and it was challenging for the field teams to complete all the required activities in one school day. Therefore, an additional day was added to complete the data collection per school. For the schools that had already been completed, smaller teams revisited the schools to complete these activities after the other fieldwork was completed. The transition benchmarking was conducted by the smaller fieldwork teams. These teams have received training on the transition survey.</p>
<p>Replacement of control schools in Wajir due to security concerns: Three control schools in Wajir have had to be replaced due to security concerns, while one control school was replaced due to concerns regarding the reliability of the data. This is challenging because the remaining control school replacements are likely to have only between eight and 12 primary 5 girls.</p>	<p>The field teams in Wajir are engaging with the DP team and local education officers to try to identify the largest control schools. We still expect the sample size in control schools in Wajir to be significantly lower than anticipated, however.</p>
<p>Accessing schools in some areas has been difficult due to lack of proper infrastructure and floods.</p>	<p>Alternative modes of transport are being used to access schools in more remote areas such as boats and motorbikes. In a particular case in Kenya, the team had to delay visiting schools until floods subsided.</p>
<p>Recording GPS coordinates for households and at the school level was challenging at times due to signal issues. Since the GPS question was mandatory on the survey, field teams were not able to submit surveys if the GPS coordinates were not recorded.</p>	<p>Given the ongoing occurrence of this issue we encouraged field staff to continuously move around to get GPS coordinates, but in the event their device failed to record we made sure that detailed accounts of the household location were recorded. The GPS question was in the end made an optional question due to low signals, however.</p>

Challenges	Mitigation approaches
Qualitative challenges	
Nigeria	
<p><u>Sampling</u></p> <ul style="list-style-type: none"> The target sample for the cohort tracking was a cohort of primary 5 girls who are part of the girls' club. However, during data collection it was found in the schools visited that the selection of girls into the girls' club is targeted at primary 6 girls. This posed a limitation for the team in terms of securing the ideal cohort (primary 5 girls in girls' clubs) for baseline, midline, and endline. Tracking primary 6 girls is likely to be challenging as this cohort would have graduated from primary school by midline and endline. Households were not always close to the school, and due to time constraints not all parents could be interviewed. Fathers were often not available for the interviews as most would be running businesses as data collection took place. 	<ul style="list-style-type: none"> An additional small sample of primary 6 girls was interviewed and participated in a rich picture exercise in order to get an understanding of their involvement in the girls' club. <p>There is a possibility that the primary 5 girls who were interviewed for baseline will be part of the club by midline. This is not guaranteed though as we do not have control over the selection of girls into the club. This could have implications for the extent to which we can answer the questions on the contribution of the girls' club.</p> <ul style="list-style-type: none"> Parent interviews were conducted in groups. Mothers were interviewed in most cases, and this affected the data in that fathers were generally reported by mothers to be more knowledgeable about their children's education as they are the ones who are typically involved and attend meetings at schools.
<p><u>Fieldwork</u></p> <ul style="list-style-type: none"> The team anticipated that because of the Purdah system (seclusion of women from public observation), mothers who are usually within the household would not always be willing to move away from their houses to another for group interviews, especially without the permission of their husbands for the interview. Locating households of cohort girls to track their parents was challenging for some teams. Fieldwork was suspended for one day after the first day of data collection due to a misunderstanding around permission to access households. 	<ul style="list-style-type: none"> We requested and were granted permission by the chief to conduct parent interviews in groups. Interviews with mothers were conducted by female researchers as access to some of the households or compounds is typically restricted to males living within those households, i.e. the husbands of the mothers being interviewed. We relied on gathering as much information as possible from the girls on the physical location, e.g. identifiable landmarks and bearings (mosque, shops, major road).

Challenges	Mitigation approaches
	<ul style="list-style-type: none"> The misunderstanding was soon successfully resolved following a meeting between OPM, the SUBEB, and DP.
<p><u>Instruments</u></p> <ul style="list-style-type: none"> Diary – for the tool to be effective the respondents have to understand the language, purpose of the diary, and instructions on how to complete it. The team anticipated that there would be challenges with administering the diary owing to literacy gaps. Registries – respondent data was entered manually on sheets that then had to be digitised but data was not always legible. 	<ul style="list-style-type: none"> The tool was simplified by adding diagrams on individual pages in the diaries as well as providing simple instructions in English and Hausa. Respondents were given the option to complete the diary in whichever language they felt comfortable using. A possible recommendation for future rounds is to have researchers use tablets to capture respondents’ personal data. This will also save time put into scanning and typing up and capturing data in Excel after fieldwork is completed.
Kenya	
<p><u>Sampling</u></p> <ul style="list-style-type: none"> Selecting the final qualitative sample of schools relied on matching the qualitative criteria of well-performing schools with the requisite number of girls in Class 5 to select from, but also required close coordination with the quantitative team as it had to match the requirements of the quantitative sample. 	<p>The DP team provided continued assistance with identifying schools for the qualitative research and updating the list of schools identified at short notice in the event a school was visited by the quantitative team and found not to meet all requirements for the qualitative team. Schools were resampled until they matched the sample. As a result of this iterative selection procedure, the final list could not prioritise well-performing schools in all the counties and took the second best well-performing school.</p>
<p><u>Fieldwork</u></p> <ul style="list-style-type: none"> Floods in Kenya due to the monsoons meant that one of the communities became inaccessible to the team. 	<ul style="list-style-type: none"> Research for this community was delayed, and the respondents were interviewed later, once the water had receded.
<p><u>Instruments</u></p> <ul style="list-style-type: none"> Diary – for the tool to be effective respondents have to understand the language, purpose of the diary, and instructions on how to complete it. The team anticipated that there would be challenges with 	<ul style="list-style-type: none"> The tool was simplified by adding simple instructions in English and Kiswahili. Respondents were given

Challenges	Mitigation approaches
administering the diary owing to literacy gaps or participants not understanding the instructions in entirety.	the option to complete the diary in whichever language they felt comfortable using.
Ghana	
<p><u>Sampling</u></p> <ul style="list-style-type: none"> Ensuring an adequate number of primary 5 girls in the school sample required regular interactions with the quantitative data. 	<p>There was regular interaction with the quantitative team and their schedule to be able to track if the schools in the qualitative sample had an adequate number of P5 girls who were club members. In cases where the number of P5 girls was somewhat low, this was mitigated by finding P4 girls who were club members as these would be easier to track going forward.</p>
<p><u>Fieldwork</u></p> <p>In some larger communities it was difficult to track the parents as these communities were quite spread out. It was especially difficult to be able to meet them in the morning, as most of them were in the fields or the marketplace for their jobs as many of them were hawkers and street-sellers.</p>	<ul style="list-style-type: none"> Parent interviews were mostly conducted in the afternoon as it was a more suitable time for them. The support of teachers and the girls was enlisted in providing directions to the residence.
<p><u>Instruments</u></p> <p>Given that the rich picture exercise involved direct expression of the thoughts and imagination of both the girls and boys, the team anticipated that some children might feel shy or hesitant in speaking up in a group setting. To fulfil the purpose of the rich picture exercise, the team was focused on ensuring that the children should not feel shy and should feel free and comfortable to open up and participate.</p>	<ul style="list-style-type: none"> During the training and fieldwork there was emphasis on the researchers using prompts and nudges to help the children feel more comfortable, and encouraging all of them to participate instead of just focusing on a few. <p>There was especially a focus on encouraging body language signals as well as phrases to remind the children to express whatever came into their minds and to join in the conversation without hesitating.</p>

Limitations to the evaluation design

The limitations to the evaluation are outlined in Table 10 along with the likelihood of such a limitation being an issue and potential mitigation approaches.

Table 10: Limitations to the evaluation

Limitation	Likelihood	Mitigation
Impact evaluation		
<p>Attributing impact of specific components of the project: The impact evaluation will be able to <i>attribute</i> the impact of DP-2 as a whole based on the final outcomes of interest assuming there is no variation in the implementation of DP-2 in the sense that the full pack of interventions (such as girls' clubs, teacher training, community plans, and educational content) is implemented in all the schools that DP-2 is operating in. Given that all DP-2 girls' are intended to be exposed to all interventions, we cannot identify a credible counterfactual for <i>specific interventions</i> that form part of DP-2.</p>	Very likely	<p>However, we will employ a contribution analysis approach to unpick the linkages between project activities, outputs, intermediate outcomes, and final outcomes, and to the degree possible seek to understand the contribution that the various project interventions have made toward achieving progress against headline outcomes. For example, we will not be able to say what the percentage change in learning is as a result of a specific intervention such as the teacher training, but rather tell a credible contribution story as to whether, given the available evidence, it is credible to say that teacher training has or not made a significant contribution to observed changes in <i>learning</i>.</p>
<p>Identifying the impact and intensity of treatment: As discussed in Section 2.3.1.1, the evaluation is particularly interested in understanding the impact of the project on girls who are exposed to a full range of DP-2 interventions. However, given that girls self-select into some of the DP-2 interventions or not all teachers have received the full teacher training package, there is a large potential for one-sided non-compliance.⁹⁴ As a result, some girls and teachers will not be exposed to the full range of DP-2 activities.</p>	Very likely	<p>The evaluation will need to try to distinguish between two types of impact: ITT and ATET. However, in order to do this, it will be important for the evaluation to have a good understanding of the fidelity and intensity of the DP-2 interventions across our sample of treated schools, teachers, and girls via the quantitative/qualitative data gathered by the evaluation and project M&E data.</p>
<p>Time to impact: As per the GEC-T guidelines, the project is looking to achieve 0.25 standard deviation impact in learning and 10 percentage change for the transition over the course of two years (2018–2020). However, in light of most recent communication from the Fund Manager/DFID, the DP-2 evaluation is expected to demonstrate 'substantial impact' on learning by midline. The main challenge in regard to demonstrating such a change in a limited time period (i.e. by midline) is that children will have only been exposed to new elements of the DP-2 package for at most two terms. This is not a significant amount of time, particularly if DP is expected to deliver</p>	Very likely	<p>DP and OPM engage further with the Fund Manager/DFID regarding setting reasonable targets for midline given the current stage of implementation of the project and the time it takes to see reasonable gains in learning.</p>

⁹⁴ Gerber and Green (2012).

Limitation	Likelihood	Mitigation
substantial impact on learning outcomes at midline.		
Sample size not powered at the strata level (only for Kenya): In Kenya, the project is working within five counties in which three different types of school exist. These are formal or public schools, non-formal or low-cost private schools, and schools located in semi-arid/arid lands such as Wajir and Kajiado. The current sample size for Kenya is not powered to detect impact at the different levels of the strata. As shown in Table 8, each stratum delivers an MDE of 17 percentage points for transition and 0.434 standard deviations for learning. These are higher than the expected MDEs for the total sample size per country and the minimum levels required by the GEC-T guidance. Therefore, the evaluation will be able to detect impact at the country level but will fail to detect impact at the level of the strata.	Very likely	We propose a number of mitigating responses for this, including: (1) tracking heterogeneity in implementation across strata through the process evaluation; (2) tracking perceptions of heterogeneity in impact across strata through the qualitative research; and (3) considering other ways to boost power.
External validity: The results from this evaluation will only be able to capture the impact of the project in the study target areas, and will not be generalisable to the entire districts, counties, LGAs, or countries.	Very likely	A mixed-methods design can be seen as mitigation in itself since we combine the quantitative inferences with qualitative inferences. In qualitative research, generalisability is concerned with whether the research results are transferable, ⁹⁵ i.e. can be extended to a wider context and have theoretical generalisability. In order to ensure both types of generalisation, to the extent possible, we will be giving rich contextual details about where the study took place and the population it worked with and discussing our empirical findings in light of previous theoretical and empirical contributions in the literature.
Barriers to transition: The project is looking to aid the transition of girls from primary through to JSS (for Kenya from middle to upper primary). As such, the barriers that girls face in transition within primary schools (i.e. primary 5 to 6) are different from the barriers that they face when transitioning to JSS. Therefore, the data gathered on barriers to transition for cohort girls at baseline might not apply to	Very likely	We will do our best to gather data at each point in the evaluation and map out the barriers at the different times of transition by speaking with multiple stakeholders (i.e. girls, teachers, parents, PTAs/School Board Management Committees (SBMCs) and community leaders).

⁹⁵ Lincoln, Y.S. and Guba, E.G. (1985) *Naturalistic Inquiry*. Sage, Beverly Hills, CA.

Limitation	Likelihood	Mitigation
girls at midline as they are to transition to JSS in the following year.		
<p>Measurement of changes in life skills: The activities undertaken by girls' clubs so far differ from school to school. Visits to schools and discussions with girls' club mentors and members and DP country staff indicated that activities around life skills, income-generating activities, and topics of discussion that students have within the clubs are at the discretion of the girls' club mentors and to some extent the interests of the students and the resources available to the school. DP-2 plans to introduce the MBW Curriculum for each school to implement as part of the girls' club activities. If consistency is maintained across the clubs, this will allow us to measure the impact of the life skills quantitatively at a statistically representative level. However, if this is not the case then this will not be possible.</p>	Likely	Through the qualitative work we will take a deep dive to uncover and discuss some of the impacts of the activities taking place in a set number of schools and girls that we will be following over the course of the evaluation in each country. We will also check via project M&E data and through the qualitative interviews whether girls' clubs are implementing the MBW Curriculum consistently.
<p>The qualitative sample approach is limited to well-performing schools only (following DP's assessment). This was done taking into account the nature and focus of the evaluation questions requiring answers from the perspectives of successful schools, which will be reflected in the qualitative data collection, with findings established and conclusions drawn as a result.</p>	Highly likely	Limiting the focus to well-performing schools is valid since it will allow us to answer the evaluation and learning questions, which we would not be able to do for schools with low performance. However, since it is a mixed-methods design, the quantitative sample ensures a larger and random sample size, which complements the qualitative purposeful sample in a way that the latter covers a larger number of schools with varying performances and can, therefore, provide data from them too.
VfM		
<p>Costs for achieving outcome might be high: The chosen cost-effectiveness analysis methodology estimates costs for a specific impact (e.g. an additional year of education). The costs may have contributed to a number of wider benefits such as teacher motivation and satisfaction, girls' self-confidence, community relationships with the school, and of course learning outcomes. Therefore, the costs may seem high for achieving only the outcome of interest.</p>	Very likely	The additional benefits will be acknowledged in the report.

Limitation	Likelihood	Mitigation
<p>Costs may be overestimated. This can happen for a number of reasons:</p> <p>(1) Without being able to concretely say activities did not contribute to an impact, we will include all activities in the costs, which may mean that some less relevant administrative costs are included.</p> <p>(2) There is often a higher cost in piloting activities than would be the case once rolled out at a greater scale, with learning and potential efficiency savings.</p> <p>It is almost certain that all costs will need to be included because we will not be able to accurately separate the contribution of different activities to the impact. Also, DP-2 is the second phase of implementation, and therefore some of the high pilot costs will have been incurred in the first phase and efficiency will already have started to be realised.</p>	Very likely	The report will give a detailed presentation of how the costs break down. This means that readers would be able to decide if certain costs should be excluded or might need to be adjusted to account for variation in context. We may also choose not to include the central administration costs if these are considered to no longer be necessary if the project were rolled out by the government without DP management.
<p>Estimates of the value of match-funding will come through interviews with key informants and so may be subject to biases, including recall bias (usually underestimating costs) and people responding according to what the interviewee thinks the evaluation wants to hear. This is a common problem with cost estimates through interviews.</p>	Very likely	We will carry out these interviews when the project is still in implementation to reduce the risk of recall bias.
<p>Data on cost-effectiveness from other interventions and studies is not always available. Many studies do not estimate or report costs.</p>	Very likely	We will try to access this information from comparable projects in the DP-2 countries and through the Fund Manager.

3. Key characteristics of baseline samples

3.1 Project beneficiaries

DP-2 targets marginalised groups with a long history of exclusion. All schools selected for the project are located within areas with low local economic development, limited educational resources, and low educational capacity. Therefore, all girls (and boys) attending schools targeted by DP-2 are considered to be marginalised.

Although marginalised girls are the primary target group for the project, boys are included in some of the project interventions. In particular, boys are targeted through boys' clubs and community-based activities and will benefit from improvements in teaching quality. For the purposes of the evaluation, boys were included only in the qualitative research; findings from group discussions with boys are presented throughout the report and integrated in the findings from the qualitative research.

In this section, we present both quantitative and qualitative findings on the key characteristics of our respondents in the baseline survey and compare our respondents to the broader beneficiary population. Quantitative data is drawn from the baseline girls' survey, household survey, and school survey. Qualitative data is drawn from team debriefs, summary notes, and notes for each data collection tool conducted in all three countries (six schools per country). Interviews with the head teacher, teachers, parents, and communities were also used to triangulate and present some of the data below in this section.

3.2 Representativeness of the learning and transition samples across regions, age groups, and disability status of the beneficiaries

This section reports on the evaluation sample breakdown by region, age, and disability status. While the GEC-T guidance suggests that these should be compared to programme estimates of the same breakdowns this information was, at the time of writing this report, unavailable from the DP-2 Management Information System. As such, we report the breakdowns, and speak to our randomised sampling approach as well as secondary data where available, to justify the representativeness of the sample to the targeted population, also highlighting any potential deviations.

The treatment schools sampled for the evaluation are drawn randomly from a sampling frame of treatment schools, with the condition that there is an available control school to which they can be matched. This approach to sampling schools ensures that the sampled schools are broadly reflective of the wider beneficiary population. In Kenya, schools were sampled across three strata (formal schools in Nairobi, Kiambu, and Machakos, non-formal schools in Nairobi, and schools in semi-arid/arid regions, i.e. Wajir and Kajiado) to be reflective of the different areas that the project is working in in Kenya.

It is important to keep in mind the limitations presented in Section 2.5, where it was noted that it was necessary to sample schools that had sufficient number of girls to be sampled. This reflects the reality of delivering cost-effective evaluations, in that it was not possible to sample schools with very few girls

(some containing fewer than five girls in the relevant cohort grades) as this would have dramatically increased the number of schools to be sampled well beyond the resource limit available for the baseline survey. As such, while the sample is broadly reflective of the wider beneficiary population, it will not be representative of those girls that attend the smallest schools or those that have very low attendance in the relevant grades.

Table 11 shows the breakdown of the evaluation sample by region across the three countries.

Table 11: Evaluation sample breakdown (by region)

	Intervention (Baseline)	Control (Baseline)
Nigeria: Sample breakdown by LGA (% of sample)		
Bagwai	5.5	5.2
Bebeji	6.6	7.9
Dala	14.3	6.0
Dawakin Kudu	8.1	7.6
Gabasawa	7.5	9.4
Garko	2.9	2.3
Kano Municipal	8.8	13.6
Kibiya	7.9	6.4
Kura	3.4	6.2
Rano	7.5	5.7
Rimin Gado	7.5	8.0
Takai	3.4	5.9
Tarauni	3.5	6.4
Tofa	2.7	4.4
Ungogo	10.3	5.2
Total (sample size)	100 (N = 1,140)	100 (N = 1,047)
Kenya: Sample breakdown by county (% of sample)		
Kajiado	8.4	10.2
Kiambu	5.0	5.3
Machakos	5.0	5.5
Nairobi	55.7	62.6
Wajir	25.9	16.3
Total (sample size)	100 (N = 1,226)	100 (N = 1,093)
Kenya: Sample breakdown by sampling strata (% of sample)		
Formal schools	33.0	36.8
Non-formal schools	32.6	36.6
Semi-arid/arid regions	34.3	26.6
Total (sample size)	100 (N = 1,226)	100 (N = 1,093)
Ghana: Sample breakdown by district (% of sample)		
Central Gonja	6.4	2.6
East Gonja	10.8	5.7
Karaga	7.7	1.3
Sagnarigu	13.7	18.6
Savelugu	9.4	10.5
Tamale Metro	22.0	27.7
Tolon	8.5	5.4
West Mamprusi	10.4	22.7
Yendi	11.3	5.4

	Intervention (Baseline)	Control (Baseline)
Total (sample size)	100 (N = 1,003)	100 (N = 860)

Source: DP-2 girls' survey 2018

Table 12 shows the breakdown of the evaluation sample by age. All pupils sampled for the quantitative research are currently in primary 5. As one would expect from this cohort of girls, the majority of respondents across all three countries are between nine and 13 years of age. Cohort girls were selected randomly from among all girls in primary 5 in their school. The age distribution in the evaluation sample is, therefore, representative of primary 5 project beneficiaries in primary schools targeted by DP-2.

Girls and boys who participated in the qualitative research are between the ages of 10 and 14 in Kenya and Ghana and eight and 13 in Nigeria. The girls who participated in the research in Wajir tend to be older than those in the other counties in Kenya. Most of the pupils who participated in the qualitative research were in primary 6 in Kenya and primary 5 in Ghana and Nigeria.

Table 12: Evaluation sample breakdown (by age)

	Intervention (Baseline)	Control (Baseline)	Intervention (Baseline)	Control (Baseline)	Intervention (Baseline)	Control (Baseline)
	Nigeria (%)		Kenya (%)		Ghana (%)	
Aged 6–8	3.3	3.0	0.2	0.1	0.4	1.2
Aged 9–11	54.1	45.4	62.9	67.6	22.4	24.8
Aged 12–13	32.3	35.3	30.1	28.5	50.3	50.3
Aged 14–15	8.9	12.5	6.6	3.5	21.5	18.4
Aged 16–17	1.2	2.8	0.2	0.2	3.3	3.4
Aged 18–19	0.2	0.9	0.0	0.0	0.4	0.4
Aged 20+	0.0	0.0	0.0	0.0	0.1	1.5
Missing	0.0	0.2	0.1	0.2	1.5	0.0
Total (sample size)	100 (N = 1,140)	100 (N = 1,047)	100 (N = 1,226)	100 (N = 1,093)	100 (N = 1,003)	100 (N = 860)

Source: DP-2 girls' survey and household survey 2018

Notes: Age is self-reported by the girl, except in cases where the girl did not know her age. In those cases, age is reported by the caregiver. When caregivers also did not know the girl's exact age, they were asked to estimate the age group that the girl falls into. In a small percentage of cases in Nigeria and Ghana, the caregiver was also unable to estimate the age group that the girl falls into.

Table 13 presents the breakdown of the evaluation sample by disability status, based on the primary caregiver's report of the cohort girl's disability status (household survey) as well as the girl's own reporting on her disability status (girls' survey). We report on two different disability thresholds: Definition 1 refers to girls with difficulty in at least one domain recorded as 'some difficulty', 'a lot of difficulty', or 'cannot do at all', while definition 2 refers to girls with difficulty in at least one domain recorded as 'a lot of difficulty' or 'cannot do at all'. Definition 2 is the definition suggested by the Washington Group to be used as a cut-off point but in recognition that different cut-off points may be most appropriate depending on the purpose.

Rates of disability reported by the girls themselves are significantly higher than those reported by their caregivers in all three countries (see Annex 18 for detailed tables). The 2011 World Report on Disability⁹⁶ notes that reporting of child disability by parents or caregivers may not always accurately represent the experience of the child. However, it is also possible that children may interpret answer categories such as

⁹⁶ World Health Organization (2011) *World Report on Disability*. Accessed on 21 July 2018 from http://www.who.int/disabilities/world_report/2011/report.pdf

'some difficulty' or 'a lot of difficulty' differently to parents. For example, we find more significant differences between child and caregiver reports when looking at disability rates using definition 1 (which includes 'some difficulty') compared to definition 2. In Ghana, the difference between child and caregiver reports is driven primarily by a larger proportion of children who report that they have difficulties remembering things or concentrating (cognitive impairment). Given that children may experience these types of difficulties particularly while at school, it is possible that caregivers may not be aware of their children's difficulties. Moreover, given that these questions were administered to pupils while at school, it is also possible that the school context could have made difficulties in remembering or concentrating more salient and these may not have always represented a cognitive disability due to health problems.

We provide brief comparisons of the disability rates (as per definition 2) in the sample with national or regional estimates of disability. In all cases, the national and regional estimates are provided by parents or caregivers, and we therefore compare them against the caregiver reports in our survey. However, it should be noted that differences in the measurement of disability, including the range of impairments asked about and the threshold used to define disability, mean that these comparisons should be interpreted with caution:

- In Kenya, evidence from the Population and Housing Census (2009) indicates that the average disability rate for girls aged 10–14 is 2.5%.⁹⁷ This rate is slightly lower than the disability rate reported by caregivers in the DP-2 sample.
- In Ghana, evidence from the Population and Housing Census (2010) indicates that the average disability rate for girls aged 10–14 living in the Northern region is 1.8%.⁹⁸ This rate is slightly lower than the disability rate reported by caregivers in the DP-2 sample.
- Data from the Ministry of Education, Science, Technology and Innovation in the Kano State ASCR for the 2016/17 academic session suggest that the disability rate among children in primary schools is 0.3%.⁹⁹ This rate is lower than the disability rate reported by caregivers in the DP-2 sample.

Table 13: Evaluation sample breakdown (by disability)

Sample breakdown (Girls)	Intervention (HH survey) (Baseline)	Control (HH survey) (Baseline)	Intervention (girls' survey) (Baseline)	Control (girls' survey) (Baseline)
Nigeria: Sample breakdown by disability (% of sample)				
Definition 1: 'some difficulty', 'a lot of difficulty' or 'cannot do at all'				
Girls with disability (overall)	7.4	6.0	15.4	13.4
Vision impairment	2.1	1.2	4.6***	2.3

⁹⁷ Kenya National Bureau of Statistics (2012) *Kenya 2009 Population and Housing Census: Analytical report on disability*.

⁹⁸ Ghana Statistical Service (2013) *2010 Population and Housing Census Report: Children, adolescents and young people in Ghana*.

⁹⁹ Note that these are the authors' calculations based on raw numbers from the Annual School Census. While the Population and Housing Census of 2006 in Nigeria did include questions on disability, we could identify no report where disability rates for Kano State were clearly reported.

Sample breakdown (Girls)	Intervention (HH survey) (Baseline)	Control (HH survey) (Baseline)	Intervention (girls' survey) (Baseline)	Control (girls' survey) (Baseline)
Hearing impairment	1.8	2.1	2.7	3.2
Mobility impairment	1.6	2.0	3.1	2.2
Cognitive impairment	1.7	0.9	6.6	5.4
Self-care impairment	0.8***	0.1	2.6***	0.8
Communication impairment	0.3	0.3	1.8**	0.7
Definition 2: 'a lot of difficulty' or 'cannot do at all'				
Girls with disability (overall)	0.9	1.4	2.5	2.8
Vision impairment	0.4	0.3	1.1**	0.3
Hearing impairment	0.0	0.2	0.2	0.5
Mobility impairment	0.4	0.9	0.6	0.9
Cognitive impairment	0.0	0.0	0.7	0.6
Self-care impairment	0.2	0.0	0.8	0.5
Communication impairment	0.0	0.0	0.3*	0.0
Sample size (N)	1,126	1,028	1,140	1,047
Kenya: Sample breakdown by disability (% of sample)				
Definition 1: 'some difficulty', 'a lot of difficulty' or 'cannot do at all'				
Girls with disability (overall)	21.5	22.8	32.2*	35.9
Vision impairment	9.6	11.4	13.1**	16.2
Hearing impairment	3.2	3.9	6.2	5.3
Mobility impairment	2.8	2.3	3.2	3.3
Cognitive impairment	6.5	7.1	12.9	14.2
Self-care impairment	1.6	1.8	2.2	2.2
Communication impairment	2.0	1.9	6.5	7.5
Definition 2: 'a lot of difficulty' or 'cannot do at all'				
Girls with disability (overall)	3.3	3.1	5.7	5.5
Vision impairment	1.2	1.2	2.2	2.2
Hearing impairment	0.6	0.6	0.8	0.7
Mobility impairment	0.2	0.1	0.5	0.2
Cognitive impairment	1.1	0.9	1.8	1.5
Self-care impairment	0.4	0.3	0.5	0.4
Communication impairment	0.3	0.2	0.7	1.0
Sample size (N)	1,091	971	1,226	1,093
Ghana: Sample breakdown by disability (% of sample)				
Definition 1: 'some difficulty', 'a lot of difficulty' or 'cannot do at all'				
Girls with disability (overall)	17.8	15.5	42.7*	38.4
Vision impairment	4.1	4.2	7.9	7.9
Hearing impairment	3.9	4.3	5.9	7.0
Mobility impairment	2.4	1.9	6.4	4.8
Cognitive impairment	8.5***	4.5	31.7*	27.8
Self-care impairment	0.8*	0.2	2.6	1.6
Communication impairment	2.1	2.1	4.8	6.3
Definition 2: 'a lot of difficulty' or 'cannot do at all'				
Girls with disability (overall)	2.1	2.1	10.3**	7.4

Sample breakdown (Girls)	Intervention (HH survey) (Baseline)	Control (HH survey) (Baseline)	Intervention (girls' survey) (Baseline)	Control (girls' survey) (Baseline)
Vision impairment	0.4	0.5	0.8	0.7
Hearing impairment	0.1	0.1	0.7	0.5
Mobility impairment	0.4	0.5	0.6	0.2
Cognitive impairment	0.9	0.9	8.3**	5.9
Self-care impairment	0.1	0.0	0.1	0.5
Communication impairment	0.6	0.3	0.4	0.4
Sample size (N)	998	859	1,003	860

Source: DP-2 girls' survey and household survey 2018

Notes: Respondents identified as having a disability include those with difficulty in at least one domain recorded as 'some difficulty', 'a lot of difficulty' or 'cannot do at all' for definition 1, and difficulty in at least one domain recorded as 'a lot of difficulty' or 'cannot do at all' for Definition 2. Asterisks indicate that means between intervention and control groups differ significantly from one another at the following levels: *** p<.001, ** p<.05, * p<.01.

Note on the use of disability indicators in the remainder of the report

In Table 13 we presented two versions of the Washington Group disability indicator. Definition 1 provides an *expanded* indicator that includes girls who report 'some difficulty' against each category of disability, while definition 2 provides a *restricted* version that does not include girls who report 'some difficulty' against each category of disability. Definition 2 is the cut-off recommended by the Washington Group¹⁰⁰ in their guidance on the implementation of disability identifiers.

The use of the recommended definition of disability indicates that, as would be expected from a randomly drawn sample of the population, only a small proportion of girls have a disability at baseline. As such, the tables presented in the following chapters do not show a disaggregation by disability status. This is because with such a small sample it is highly likely that this sample would not actually be representative of the full population of girls with a disability, and any conclusions that would be drawn from presented results are more than likely to be misleading.

Under definition 1, the expanded definition of disability, the proportion of girls reported as having a disability increased between four to six times depending on the country. While this would indeed provide a sufficient sample size in terms of saying something about this population, we strongly recommend against reporting disaggregation against the expanded indicator for a number of reasons:

- The dramatic increase in the rate of disability (increasing on average over four times) compared to the levels that are reported (particularly in Ghana and Kenya, with rates of disability reported by treatment girls of 43% and 32% respectively) do not seem to provide an accurate representation of girls in a population with a disability that would affect their learning.
- The full disability indicator is a function of six distinct disability types, yet approximately 50% of this increase is driven by increases in the cognitive indicator. This indicator is based on the

¹⁰⁰ Washington Group (2017) *Analytic Guidelines: Creating Disability Identifiers Using the Washington Group Short Set*.

question ‘do you have difficulty remembering or concentrating?’. In a school context where a child or caregiver is being asked whether they have *some difficulty* in remembering or concentrating, it is not unreasonable to expect that a child or caregiver might respond yes, even if this is not as a result of some distinct disability in the child.

Thus, reporting against the expanded definition of disability is very unlikely to allow one to draw reasonable conclusions about the particular barriers to education faced by children with a disability. We therefore strongly recommend against using this version of the disability indicator for analysis.

3.3 Educational marginalisation

Girls’ characteristics

In this section, we present findings on girls’ contextual characteristics. These are characteristics that are considered to be changeable and complex; for example, languages can be acquired or households can move in and out of poverty.¹⁰¹ Table 14 presents the characteristics of girls in the evaluation sample across the three countries, followed by a discussion of the findings.

Table 14: Girls’ characteristics

	Nigeria		Kenya		Ghana	
	Intervention (%)	Control (%)	Intervention (%)	Control (%)	Intervention (%)	Control (%)
Single orphan	8.8	8.0	11.9	11.0	8.9	9.4
Double orphan	0.5	0.7	1.0	0.8	1.3*	0.5
Living without both parents	5.9	5.5	10.2	10.3	20.9	17.8
Living in female-headed household	5.1	4.9	33.4	31.5	9.9	9.0
Married	0.0	0.0	0.2	0.1	0.1	0.1
Mother (under 18)	0.4*	0.0	0.3	0.4	0.2	0.3
Mother (under 16)	0.4*	0.0	0.3	0.4	0.2	0.4
Difficult to afford for girl to go to school	23.2	22.5	64.6	65.5	75.2	72.8
Household does not own land for themselves	41.3	40.6	38.1	39.4	57.1	56.5
Extreme poverty rate (based on poverty line of \$1.90 / day)	24.2	24.1	25.3	25.7	8.4	8.9
Poverty rate (based on poverty line of \$3.10/day)	57.3	57.1	45.9	45.7	25.8	26.8
LOI is different from mother tongue	12.3	13.5	91.8	90.8	96.8*	94.8
Girl does not speak LOI	1.7	1.4	8.1***	4.8	9.3	11.5

¹⁰¹ See the Gender Equality and Social Inclusion (GESI) addendum of December 2017.

	Nigeria		Kenya		Ghana	
	Intervention (%)	Control (%)	Intervention (%)	Control (%)	Intervention (%)	Control (%)
Head of household has no education	42.0	42.9	27.8**	23.7	70.8	72.2
Primary caregiver has no education	44.3**	38.7	29.4**	24.2	75.1	77.1
Living with one parent only	9.6	9.5	27.5	28.5	15.7**	12.2
Rural location	64.4	67.6	-	-	-	-
Sample size (N)	1,126	1,028	1,091	971	998	859

Source: DP-2 household survey 2018. All indicators are reported by caregivers.

Notes: (1) LOI refers to the language in which caregivers report that their child is learning in at school. This can be different from the language policy of the country. (2) The poverty rate is calculated by averaging the poverty likelihood that the Poverty Probability Index (PPI) scorecard assigns to each household. (3) Rural or urban location was based on the school's location that the cohort girl attends as reported in EMIS data. This information was available for Nigeria only. (4) Asterisks indicate where means between intervention and control groups differ significantly from one another at the following levels: *** p<.01, ** p<.05, * p<.01.

Living arrangements and parental education

The majority of girls in the sample live with at least one of their parents. Living arrangements in Kenya tend to be more diverse, with a third of girls living in female-headed households and 27% living with only one parent. According to the qualitative study, in some cases in Kenya girls lived with their aunt or uncle so as to be able to enrol in school, for economic reasons, or where their parents needed support. In other cases, their parents informally 'adopted' cousins to live with them. In Ghana, almost a fifth of the sampled girls live without both parents. Among girls who lived without both parents, the majority were living with a grandparent, aunt, or uncle. According to the literature discussed earlier, such living arrangements can represent a barrier to girls' education since girls can be seen as a financial burden requiring expenses associated with their schooling. Single-parent families will also struggle to meet the costs to send their children to school, which is the biggest barrier to girls' education in all three countries according to the literature.

There is a great disparity in the proportion of household heads and primary caregivers with no education in the three countries. Approximately three-quarters of primary caregivers in Ghana do not have any level of education compared to approximately one-quarter of caregivers in Kenya.

Early marriage and pregnancy

At baseline, the proportion of girls who are married or who are mothers is very low across the three countries. However, one may expect rates of marriage and motherhood to change throughout the course of the evaluation as the cohort girls become older. In Nigeria, 57% of head teachers considered early marriage, but not pregnancy, to be a reason that girls drop out of school. In Ghana, about a quarter of headteachers reported that early marriage (21%) and pregnancy (26%) lead to school dropout, compared to a smaller proportion in Kenya (early marriage: 12%, pregnancy: 17%). In Nigeria, most parents support their children pursuing their education only up until secondary school, after which girls are expected to marry.

Poverty

Poverty appears to be one the main drivers of marginalisation. Around a quarter of households in both Nigeria and Kenya are considered to be extremely poor, with a further 30% of households in Nigeria and a further 20% of households in Kenya considered poor.¹⁰² In Kenya, there are large regional differences in this regard: over half the households surveyed in the semi-arid/arid regions (Kajiado and Wajir) are extremely poor, compared to about a tenth of households in the other counties.¹⁰³ The poverty rate for the sample in Ghana is lower, with about a tenth of households considered to be extremely poor and a quarter considered to be poor. Given that poverty is the biggest barrier to girls' education according to the literature, we can assume that DP-2 cohort girls living in poor households are at particular risk of dropping out or missing school.

We compare the rates of extreme household poverty to national and regional averages in the three countries.¹⁰⁴ The reported estimates are based on the same measure of poverty (the \$1.90/day poverty line using the PPI scorecard) as the one used in this evaluation.

- Based on data from the 2005/06 Kenya Integrated Household Budget Survey, 7% of households in Nairobi and 60% of households in North Eastern province (which includes Wajir) are considered to be extremely poor based on the \$1.90/day poverty line and 15% of households in Nairobi and 81% of households in North Eastern province are considered to be poor based on the \$3.10/day poverty line. In the DP-2 sample, the poverty rates for children attending non-formal schools in Nairobi and formal schools in Nairobi, Kiambu, and Machakos are slightly higher than the cited average household poverty rates for Nairobi. The poverty rates for sampled households in the semi-arid/arid regions are similar to the poverty rate for North Eastern province.
- Based on data from the 2012/13 Ghana Living Standards Survey, the average household extreme poverty rate in the northern region in Ghana is 20%, while the poverty rate is 44%. These regional averages are substantially higher than the poverty rates in the DP-2 sample, suggesting that children attending the sampled schools are from relatively less poor households.
- Based on data from the 2012/13 General Household Panel Survey, the average household extreme poverty rate in the North West zone (which includes Kano) in Nigeria is 28%, and the average household poverty rate is 62%. The poverty rates for the DP-2 sample are fairly similar to this.

¹⁰² Household poverty is measured based on the PPI scorecard, which assigns each household a likelihood of being poor based on a set of 10 country-specific indicators (see www.povertyindex.org/). The poverty rates presented here are the proportion of households that live in extreme poverty according to the International Poverty Line set at \$1.90/day at purchasing power parity at 2011 prices, and the proportion of households that live in poverty according to the International Poverty Line of \$3.10/day.

¹⁰³ A breakdown of girls' characteristics and potential barriers to learning and transition by sampling strata in Kenya is presented in Annex 18.

¹⁰⁴ Such a comparison provides a useful benchmarking for our sample. However, please note that national surveys look at averages including households in which no children enrol in school, and who therefore are likely to be poorer than households in our sample in which all have, by definition, at least one child enrolled in school.

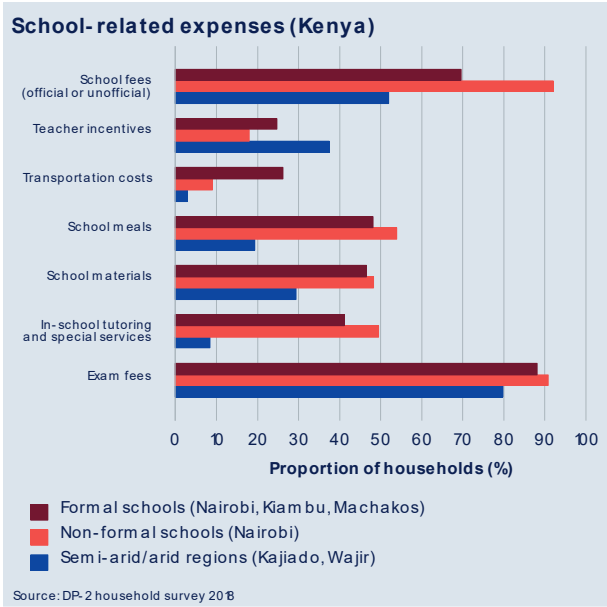
Linked to poverty, **a large proportion of caregivers report that it is difficult to afford for the cohort girl to go to school, particularly in Kenya and Ghana.** While the poverty rate is higher in the semi-arid/arid regions of Kenya, a lower proportion of caregivers in these regions report having difficulty affording to send their child to school. In line with this, caregivers in these regions are less likely to report having incurred school-related costs during the last school year compared to caregivers in other parts of Kenya (see Figure 9).

Non-formal schools in Nairobi, which are low-cost private schools, may charge school fees and it is therefore unsurprising that over 90% of caregivers of cohort girls attending non-formal schools report paying school fees in the last school year. However, basic education in formal government schools is supposed to be free. Despite this, almost 70% of caregivers in formal government schools in Nairobi, Kiambu, and Machakos report having paid official or unofficial schools fees in the last school year, and almost 90% paid examination fees.

Parents in Kenya, interviewed as part of our qualitative study, especially struggle when they have to pay fees for several children or one parent is the sole earning member of the family. Where livelihoods depend on the rains, such as in the schools visited in Kajiado and Wajir, caregivers are less likely to be able to afford schooling-related expenses during drought years, and the parent and child must migrate to find work. The school staff in Kenya acknowledge that parents are often unable to make ends meet and this results in absenteeism. Some children are sent back home from school because they do not have money for the examination fees.

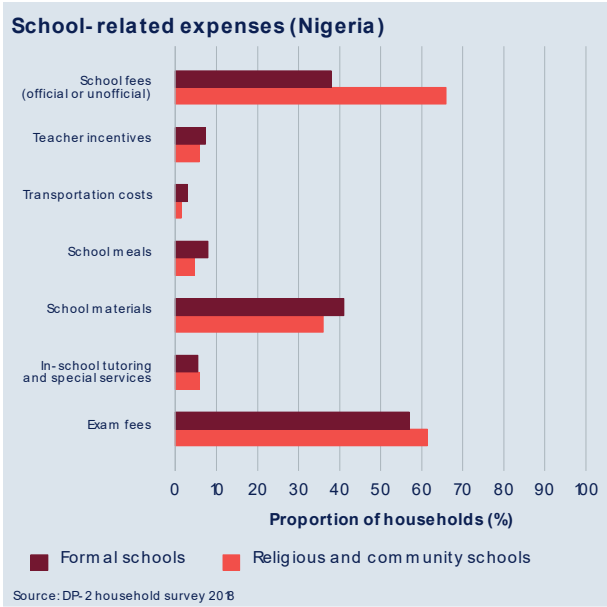
Several parents that the qualitative team met in Kiambu spent a significant portion of their income (often more than half) on their children's education. They supported other parents in need whenever they could, and the community is very supportive toward children's education. It is worth mentioning that this community is relatively not poor compared to the other communities we visited for the qualitative baseline.

Figure 9: Types of school-related expenses incurred by households in the last school year (Kenya)



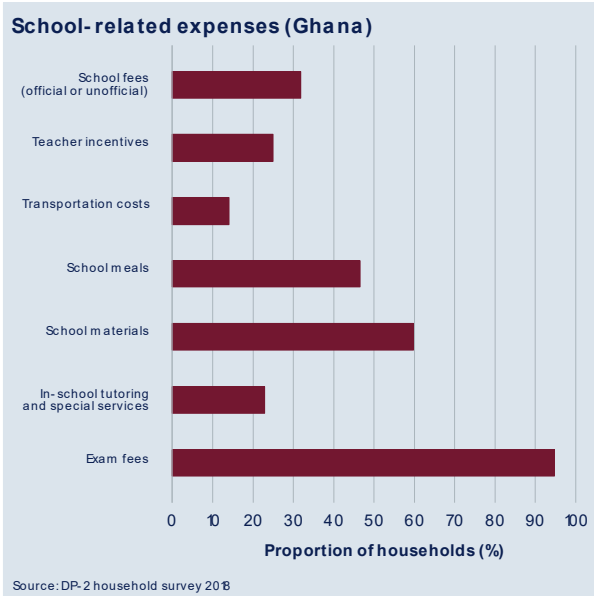
In Nigeria, while less than a quarter of caregivers reported that affording education for their child was difficult, head teachers considered schooling-related expenses to be one of the main reasons that lead to girls dropping out of school, with 44% of head teachers mentioning this as a cause of dropout. Similar to Kenya, basic education in formal government schools is technically free but many caregivers report having to pay school fees or examination fees (Figure 10). Caregivers of girls attending religious and community schools are more likely to pay school fees, which is expected since these schools are not government schools and can, therefore, charge fees. In the qualitative research, parents in Nigeria also mention a lack of financial means as a barrier to sending their children to school. Girls reported witnessing their peers being sent away from school for not having paid school fees.

Figure 10: Types of school-related expenses incurred by households in the last school year (Nigeria)



Despite the rate of extreme poverty in Ghana being lower than in the other countries, approximately three-quarters of caregivers in Ghana report that it is difficult to afford to send their child to school. As in the other countries, attending a government school is technically free in Ghana but around 30% of caregivers report paying official or unofficial school fees (Figure 11). Caregivers also report frequently paying examination fees and paying for school supplies and school meals. In the qualitative research, the lack of financial resources was one of the main barriers to parents sending their daughters to school, with parents struggling to purchase school supplies such as books, sandals, uniforms, and stationery items.

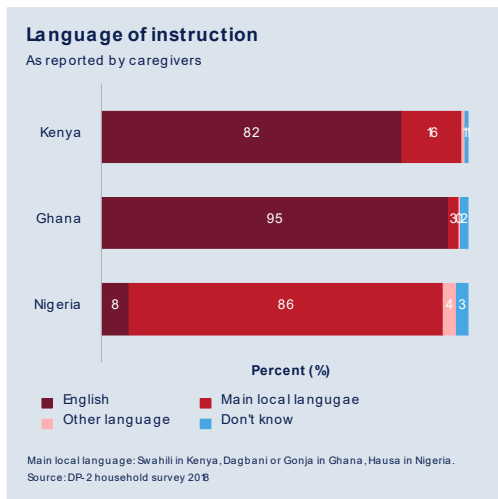
Figure 11: Types of school-related expenses incurred by households in the last school year (Ghana)



LOI and girls' mother tongue

According to national guidelines, the LOI in the upper primary grades in all three countries should be English but this is not always implemented. In the household survey, we asked caregivers what the main LOI is that their children are taught in at the school their child attends (see Figure 12) and whether their child speaks this LOI.

Figure 12: LOI



In Kenya, the language policy seems to be generally implemented, with 82% of cohort girls learning in English according to their caregivers. While the majority of girls in Kenya overall speak the LOI, almost a fifth of the sampled girls in Wajir and Kajiado do not speak the LOI. This is echoed by the findings from the qualitative study. Language was reported as the biggest barrier to teaching in Wajir, where children do not speak or struggle with speaking Swahili and English. However, all the girls who kept diaries as part of the qualitative research wrote their entries in English. Moreover, a few children cited books in their diary entries and used a poetic writing style, which we assumed could be because children at some schools receive books for reading and attend a weekly book club.

In Ghana, almost all girls are learning in English according to their caregivers, although about one-tenth of caregivers report that their child does not speak the LOI. In the qualitative study, most of the girls wrote their diaries in English, although their spelling skills and command of the language were generally fairly low. Some parents reported that their daughters had started occasionally speaking English at home.

In contrast, in Nigeria only 8% of cohort girls learn in English, while 88% learn in Hausa. Teachers interviewed for the qualitative study noted that Hausa is used predominantly in schools, although the LOI at all the schools visited for the qualitative study is both Hausa and English. Given that Hausa is the mother tongue of the majority of girls in the sample, most girls are expected to be speaking the LOI, which is usually Hausa. Teachers were generally more comfortable communicating in Hausa and the cohort girls completed the diary exercise entirely in Hausa.

Barriers to learning and transition

This section focuses on barriers to learning and transition. The project design focuses on poor attendance, poor teaching quality, lack of life skills, and lack of parental and community support as key barriers to improved learning and transition – these factors are discussed in detail as intermediate outcomes in Chapter 5. In this section, we focus instead on additional barriers to education that contribute to the educational marginalisation of the girls targeted by DP-2, specifically safety and security, distance to school, child labour and high chore burden, and inadequate school facilities. Table 15 shows the proportion of girls in the sample who face each of these potential barriers to learning and transition.

Table 15: Potential barriers to learning and transition¹⁰⁵

	Nigeria		Kenya		Ghana	
	Intervention (%)	Control (%)	Intervention (%)	Control (%)	Intervention (%)	Control (%)
Home / community level						
Safety and distance to school						
Fairly or very unsafe travel to schools in the area (caregiver report) [^]	1.8	2.9	16.8	16.2	6.7	7.8
Doesn't feel safe travelling to/from school (girl report)	7.7	7.1	9.5	8.6	8.1***	5.1

¹⁰⁵ The proposed template included sections on teachers and teaching quality, attendance, and parental/community support. These factors and their relationship with girls' characteristics and other barriers are discussed in detail in Chapter 5 as intermediate outcomes of the project.

	Nigeria		Kenya		Ghana	
	Intervention (%)	Control (%)	Intervention (%)	Control (%)	Intervention (%)	Control (%)
Closest primary school is further than a 30-minute walk away [^]	6.4	6.9	9.9	9.8	9.3	8.6
Closest secondary school is further than a 30-minute walk away [^]	37.9***	47.0	30.0	32.7	62.5	62.1
Household chores						
High chore burden (spends a quarter of the day / a few hours or more on chores) [^]	37.8	38.8	15.2	17.9	35.9*	40.7
Helps with agricultural work, family business, or work outside the home [^]	66.7	67.8	16.9	19.3	78.7*	82.4
School level						
Safety at school						
Doesn't feel safe at school	6.9	6.7	3.5	3.8	4.3	3.5
School facilities						
Pupil-teacher ratio (PTR) over 40	72.0***	80.7	37.8***	24.7	24.5	22.1
Proportion of unqualified teachers	8.3***	12.9	13.2	14.7	4.7***	10.2
School has no female teachers	44.0***	63.3	4.6	4.7	4.8***	13.3
School does not have access to water	19.4	20.6	3.3***	0.9	9.6	8.1
School does not have separate toilets for girls	27.9***	55.1	1.7***	3.3	11.0***	23.8
School does not have access to electricity	9.8***	62.2	2.0	1.3	8.7***	43.7
School had at least one day without electricity in last five days (of schools with electricity)	72.8***	80.8	35.9***	43.2	48.7***	17.3
Sample size for indicators from household survey (marked with [^]) (N)	1,126	1,028	1,091	971	998	859
Sample size for indicators from girl or school survey (N)	1,140	1,047	1,226	1,093	1,003	860

Source: DP-2 girls' survey, household survey, and school survey 2018

Notes: (1) A teacher was considered unqualified if their highest level of education was 'incomplete secondary' or 'completed secondary'. (2) Access to electricity refers to access from any source, including the national grid, generators, solar panel, or any other source. (2) Asterisks indicate that means between intervention and control groups differ significantly from one another at the following levels: *** p<.01, ** p<.05, * p<.01.

Safety and distance to school

Feeling unsafe either on the way to school and/or on the school premises seems to be an issue. Around 5–10% of cohort girls across the three countries report that they consider their journey to school unsafe. Caregivers' reports differ from their children's in Nigeria and Kenya. In Nigeria, a lower proportion of caregivers consider the journey to school unsafe compared to their children, while in Kenya the proportion is higher – with almost a fifth of caregivers considering the journey to school to be fairly or very unsafe for

their child. Reasons why the school trip was considered unsafe by caregivers in Kenya, included harassment by adults (44%), petty crime (38%), long distance (26%), and kidnappings (22%).¹⁰⁶

In the qualitative research, unsafe school trips were a concern particularly for caregivers in Kenya, and particularly in formal and non-formal schools in Nairobi, Kiambu, and Machakos. In the qualitative study, teachers in both the formal and non-formal schools in Nairobi reported feeling unsafe. Both of these schools were located in informal settlements that were considered to be particularly insecure. Teachers at the formal school reported they sometimes felt unsafe in the community, especially if they left late. Moreover, they reported being hesitant to approach the community directly in the event of a problem and referred children to caseworkers if they felt that children needed attention. Similarly, in the non-formal school in Nairobi, the children are not left unsupervised outside the school and an adult has to accompany the child home. In the formal and non-formal schools, the majority of girls felt safe while at school. All schools visited by the qualitative team in Kenya were fenced, with some of the schools guarded by a security guard stationed at the gate.

In Wajir and Kajiado, caregivers and girls in the quantitative study were less likely to consider the journey to school unsafe but girls were more likely to feel unsafe while at school compared to other areas. Attacks on teachers have resulted in many non-local teachers leaving schools in Wajir, which has resulted in a teacher shortage. In Kajiado, the school becomes inaccessible during the rains as it is far from the main road, and wild animals pose a threat to children's security if they are walking home when it is dark.

The majority of households are located close to a primary school in all three countries. Secondary schools were reported to be further away, particularly in Ghana where over 60% of the pupils would have to walk further than 30 minutes to their closest secondary school. This could pose a barrier to girls transitioning successfully between primary and secondary school.

Household chores and labour demands

While children's involvement in household chores is not always considered harmful, research suggests that performing household chores for more than 21 hours each week (or three hours a day if spread across seven days) is likely to negatively affect school attendance and learning.¹⁰⁷ In all countries, but particularly in Nigeria and Ghana, a large proportion of girls spend about a quarter of a day on household chores on a regular day. The definition of a 'high chore burden' in this study was chosen to be spending 'a quarter of the day / a few hours or more' each day on household chores, which roughly equates to the aforementioned 21 hours a week. As shown in Table 15, more than a third of girls in Ghana and Nigeria and about 16% of girls in Kenya have a high chore burden according to this definition. In addition, two-thirds of children in Nigeria and 80% of children in Ghana are faced with labour demands in the form of agricultural work or work outside the home.

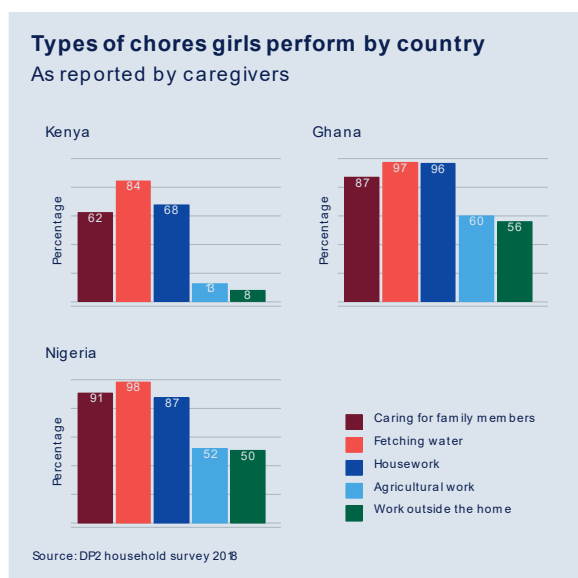
Figure 13 shows the types of chores that girls perform in each country on a regular day as reported by caregivers. The vast majority of girls help with caring for family members, fetching water, and doing

¹⁰⁶ Respondents could select more than one reason.

¹⁰⁷ International Labour Organization (2017) *Global estimates of child labour: results and trends 2012–2016*. ILO, Geneva.

housework. Helping with agricultural work or with a family business inside or outside the home is common in Nigeria and Ghana.

Figure 13: Types of chores girls perform by country



Through the diaries, we learn that girls across all three countries participate in several chores at home before they go to school and once they come home. Some of the girls are occasionally asked not to go to school in Kenya. While a reason is not always provided as to why they are asked to skip school, in Kajiado this is to mind the cattle. Some schools in Kenya face a problem with seasonal absenteeism, especially during drought, when children migrate out of the area to feed their cattle with their parents. In Ghana and Nigeria, girls reported in their diaries that they were performing tasks such as sweeping, cooking, caring for younger siblings, going to the market, and fetching water. Apart from household chores, girls supported their parents by participating in trading activities or working as hawkers in Ghana, where they either worked with their parents directly or independently. Even if this did not mean the girls missed school, it had a bearing on their punctuality.

Insufficient teachers and school facilities

Pupils in all countries are often learning in overcrowded classrooms, with PTRs being over 40¹⁰⁸ in large proportions of schools, particularly in Nigeria. In the qualitative study, shortage of teaching staff was reported to be a problem particularly in Nigeria, where five schools visited by the qualitative team reported that the PTR was high. One of the head teachers reported that, after DP-1 training, there was a massive transfer of teachers out of the school and, as a result, there were not enough teachers of literacy and numeracy lessons in the school for some time. One teacher raised concerns about being overwhelmed by

¹⁰⁸ UNESCO uses a PTR of 40:1 as the benchmark and considers this PTR to be sufficient to provide quality instruction. See UIS (2006) *Teachers and educational quality: monitoring global needs for 2015*. UNESCO, Montreal.

the number of classes he has to cover per day due to the shortage of staff. In Kenya, although teachers at some schools were working at full capacity and schools were oversubscribed, teacher shortage was not reported to be a major concern.

In Nigeria, many pupils also attend schools with inadequate infrastructure such as lacking access to water, electricity, and separate toilets for girls, and many schools have no female teachers. According to the qualitative study, the majority of schools in Nigeria and Ghana have limited space to accommodate other school resources such as a playground for pupils or space for possible expansion. In Ghana, about half of the schools were sharing either their boundary, office buildings, or their playground with one or possibly two other schools in the area, while about half the schools did not have any playgrounds. Two schools in Ghana mentioned a problem around land encroachment from the community, which had added to the challenges they were facing and created a difficult relationship with community members.

Most of the schools in Ghana and Nigeria had a shortage of classrooms. In such cases, students had to either sit on desks or stand during the lessons. The shortage of textbooks and other amenities such as usable blackboards or chalks in the classroom were also cited as critical challenges by the teachers in both countries. In Nigeria, one of the implications of space shortage is that schools are forced to operate morning and afternoon class sessions for different grades, where primary 1–3 attend the afternoon sessions and primary 4–6 attend morning sessions. Moreover, in some instances, schools do not have a permanent space for the learning centre. For example, one school uses the primary 6 classroom as the learning centre, resulting in primary 6 pupils having to leave their classroom if other classes want to access the learning centre.

Treatment schools that have been part of the DP-1 phase of the project would be expected to have access to electricity either through the grid or through another source in order to make use of the learning centre. As expected, electricity access is far more common in treatment schools, although around 10% of treatment schools in Nigeria and Ghana report not having access to electricity through any source, including generators or solar panels. Among the schools that have access to electricity the supply appears to be variable, with the majority of schools not having had electricity for at least one out of the five days preceding the visit. Lack of reliable access to electricity is likely to affect the use of the learning centre in schools targeted by DP-2.

In the quantitative survey, the majority of Kenyan schools had adequate school facilities but electricity supply also varied there. Findings from the qualitative study show a mixed picture with regards to learning space, with some schools being large and newly built and others small and overcrowded.

3.4 Intersection between key characteristics and barriers

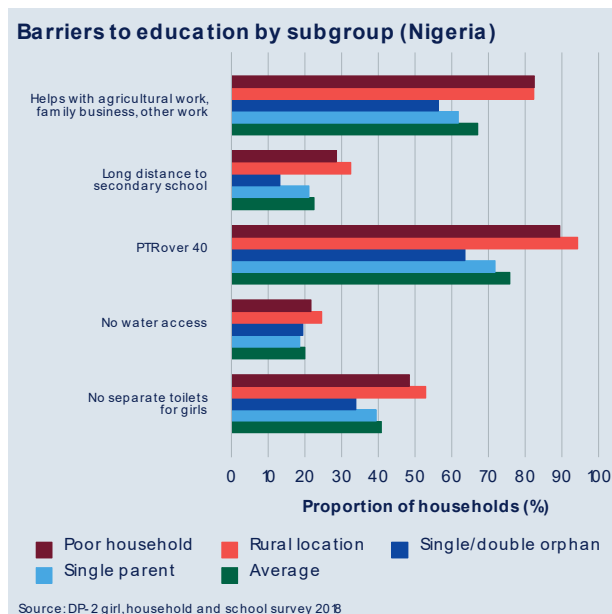
In this section, we explore further what some of the key barriers to learning and transition are for the key subgroups targeted by DP-2. In Section 1.2 we discussed the barriers to girls' education presented in the literature, while this section elaborates on those barriers that are specific to each country for our cohort of girls. In general, we can see that there is a great overlap between the available evidence and our own findings but thanks to our analysis we can clearly demonstrate the extent to which these barriers are common across all the respondents and are specific to our population of girls and their caregivers in each country.

Nigeria

In Nigeria, key subgroups targeted by DP-2 include children living in extreme poverty, households in rural locations, orphaned children, and children living with single parents. Compared to the sample average (the green bar in Figure 14), children from extremely poor and rural households are more likely to attend schools with poor facilities and large PTRs and also tend to live further from secondary schools. While the amount of time that girls spend on household chores is similar across subgroups (not shown in the figure), girls from poor and rural households are more likely to be helping with agricultural work, a family business, or other work outside the home. This indicates that children from poor and rural households may face greater pressure to drop out of school in order to contribute to income-generating activities for their household.

In contrast, being an orphan or living with a single parent does not appear to be correlated with a higher chore burden or work, longer distances to school, and poorer school facilities. It is, however, possible that orphans and girls living with single parents are disadvantaged in other ways; for example, they may receive less parental attention and support. This is explored further in subsequent sections of this report.

Figure 14: Barriers to education by subgroup (Nigeria)



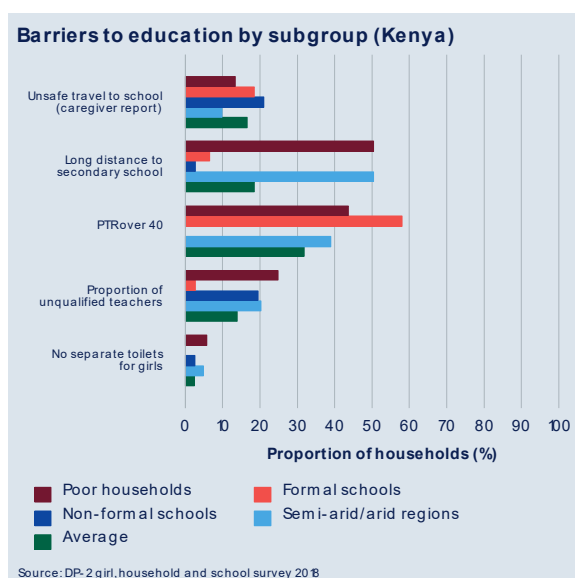
Kenya

In Kenya, poverty is considered to be one of the main drivers of marginalisation. In addition, a key marginalised subgroup targeted by DP-2 is children from nomadic and pastoralist communities. While we are not able to classify individual girls as nomadic or pastoralist, the majority of these communities are found in Kajiado and Wajir (semi-arid/arid regions), and this category is therefore used as a proxy for this subgroup. Compared to the sample average (the green bar in Figure 15), girls from poor households and living in semi-arid/arid regions are more likely to attend schools with poorer facilities and larger PTRs and also tend to live further from the nearest secondary school.

Another subgroup targeted by DP-2 is girls living in informal settlements, and particularly those attending non-formal schools. DP has noted that the main concern in non-formal schools is not the school infrastructure but the quality of teaching, due to large numbers of un- or underqualified teachers and high teacher turnover. Non-formal schools, but also schools in the semi-arid/arid regions and poor schools, all have higher proportions of unqualified teachers compared to formal schools.

As a comparison, we have also presented results for formal schools in Figure 15. As expected, children attending formal schools are in general less likely to face barriers to education, although they are the most likely to attend a school where PTRs are large.

Figure 15: Barriers to education by subgroup (Kenya)



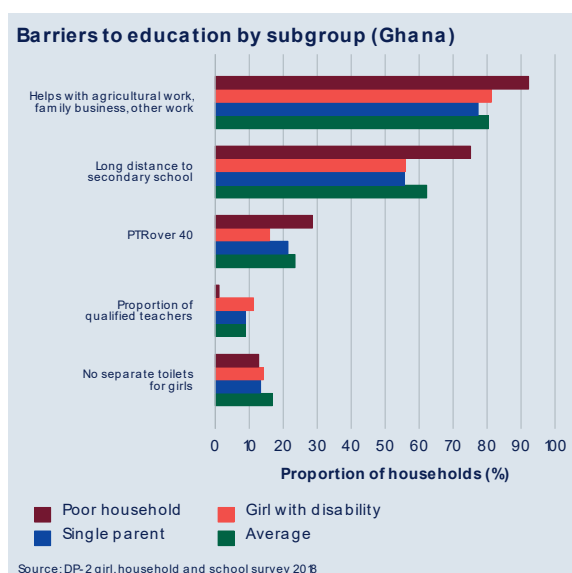
Ghana

In Ghana, key subgroups targeted by DP-2 include children living in extreme poverty, children living with single parents, and children with disabilities. Compared to the sample average (the green bar in Figure 16), children from extremely poor households are more likely to attend schools with large PTRs, tend to live further from secondary schools, and are more likely to be helping with agricultural work, a family

business, or other work outside the home. As mentioned above for Nigeria, children from poor households may face greater pressure to drop out of school in order to contribute to income-generating activities for their household.

In contrast, living with a single parent or living with a disability does not appear to be correlated with a higher chore burden or work, longer distances to school, and poorer school facilities. Children with disabilities are likely to face other barriers, such as access to appropriate educational facilities and materials, particularly if they live in poor households. Similarly, children in single-parent homes may face other barriers such as lack of parental attention and support.

Figure 16: Barriers to education by subgroup (Ghana)



Overall, these findings suggest that marginalisation is often multidimensional. Across all three countries, poverty and location/geography seem to be the most important characteristics that affect children’s access to school and the quality of the school infrastructure. This is evident also from findings from the qualitative research, where the economic conditions and migratory patterns of families are linked to children taking on responsibilities to look after the house or animals and to contribute to the economic sustenance of the household, which may result in seasonal absenteeism from school or children arriving late to school.

3.5 Appropriateness of project activities to the characteristics and barriers identified

While there are differences between the three countries, when households are poor and located in rural or remote areas then access to schools becomes more challenging and children may be required to

support income-generating activities for the household. Also, the schools that are available in poor, rural, and remote areas tend to have poorer infrastructure and are more likely to be understaffed. DP has recognised extreme poverty and living in remote or rural locations as drivers of marginalisation in all three countries and plans to address these challenges through community action planning and fostering more supportive community attitudes. As has been discussed in Section 1.2, and as has been recognised by DP, these are structural factors that cannot be comprehensively addressed by an intervention like DP-2 in isolation. These factors are therefore likely to present a continuing risk to project implementation and likelihood of achieving impact.

Children engaged in child labour are another key subgroup targeted by DP-2 across the three countries. We find that it is common for children in all three countries to spend large amounts of time on household chores, as well as to support agricultural work and family businesses even while they are enrolled in and attending school. Given that DP-2 works predominantly with in-school children, it seems particularly important for the project to identify children at risk of dropping out of school due to their involvement in income-generating activities.

In Nigeria, children are likely to attend schools with inadequate facilities and overcrowded classes. As discussed in Section 1.2, inadequate school infrastructure and large classes can make it challenging for teachers to implement new knowledge and skills obtained through teacher training, which may pose a large challenge to the intervention achieving its impact. Project implementation is also affected by poor electricity supply and limited space, for example, which prevent learning centres from being used to their full extent.

4. Key outcome findings

4.1 Learning outcomes

One of the overall goals of DP-2 is to improve learning outcomes in literacy and numeracy. The project's vision is that it will contribute to pupils' ability to actively engage in their education and learn more effectively by improving the quality of education, which will enable pupils to successfully complete primary education and transition to secondary school. The project is particularly targeting the later primary years to allow gains in learning outcomes to materialise by the time that pupils sit examinations at the end of their primary school careers. In this way, gains in learning outcomes are expected to contribute toward successful completion of primary school and transition into secondary school or into other opportunities.

In this section, we present findings from the quantitative and qualitative research on pupil learning. We first describe the learning assessments that were administered to pupils, presenting baseline findings on pupils' aggregate literacy and numeracy outcomes and on pupils' performance across different learning domains. Next, we examine how teachers, parents, and individuals involved in CAP activities perceive the contribution of DP-2 to pupil learning. We then present findings on how pupil learning outcomes differ across subgroups and which factors predict pupil learning. Finally, we present the learning targets for the midline and endline evaluation rounds.

4.1.1 Measurement of pupil learning

For the baseline survey, the learning cohort pupils who are currently in primary 5 were tested on English literacy and numeracy. In addition, the English literacy and numeracy tests were also administered to a smaller sample of pupils in primary 6 and primary 7 (in Kenya)/JSS-1 (in Ghana and Nigeria) in treatment schools only, as part of a benchmarking exercise to set learning targets for subsequent evaluation rounds (see Box 4 for details on the learning benchmark group). Pupils interviewed for benchmarking purposes will not be tracked in subsequent evaluation rounds.

English literacy was assessed through the EGRA and the GEC's SeGRA. Numeracy was assessed through the EGMA and the GEC's SeGMA. EGRA and EGMA are oral tests that are administered on a one-on-one basis, while SeGRA and SeGMA are classroom-style written tests.

The learning tests assess the following skill areas across different subtasks (see Table 16). Subtasks that assess reading were scored by creating a WPM score of the number of letters or words read correctly per minute. Other subtasks were scored as the percentage of questions answered correctly. Aggregate literacy and numeracy scores are the averages of the subtask scores, with equal weighting of all subtasks. Aggregate scores range from 0 to 100 and can be interpreted as the overall percentage of questions that the pupil has answered correctly. Further details on the construction and scoring of the learning assessments are provided in Annex 9.

Table 16: English literacy and numeracy subtasks for the learning cohort

Number	Skill area	Description of task	Scoring
English literacy			
EGRA Subtask 1	Letter sound / name identification	Pupils were shown 100 upper-case and lower-case letters and were instructed to sound out / name as many as they could in one minute	Correct letter sounds / names per minute
EGRA Subtask 2	Familiar word reading	Pupils were shown 50 common, familiar words and were instructed to read as many as they could in one minute	Correct WPM
EGRA Subtask 3	Invented word reading	Pupils were shown 50 one- and two-syllable invented words and were instructed to read as many as they could in one minute	Correct WPM
EGRA Subtask 4	Oral reading fluency	Pupils were instructed to read a short passage (approx. 240 words) in a time limit of four minutes	Correct WPM
EGRA Subtask 5	Comprehension	Pupils were asked five comprehension questions about the passage, including simple recall and at least one inferential question	% correct
Numeracy			
EGMA subtask 1	Number identification	Pupils were asked to orally identify 20 one-, two-, and three-digit numbers	% correct
EGMA subtask 2	Number discrimination	Pupils were shown 10 sets of two numbers and asked to name the bigger of the two	% correct
EGMA subtask 3	Number pattern recognition	Pupils are shown 10 patterns of four numbers, one of which is missing, and are asked to identify the missing number	% correct
EGMA subtask 4	Addition	Pupils are asked to complete 25 addition problems	% correct
EGMA subtask 5	Subtraction	Pupils are asked to complete 25 subtraction problems	% correct
EGMA subtask 6	Word problems	Pupils are asked to answer five word problems that are read out orally to the pupil	% correct
SeGMA subtask 1 (Kenya and Ghana only)	Advanced number operations (multiplication, division, etc.)	Procedural questions on multiplication and division, fractions and proportions, and geometry and measurement	% correct

Notes: (1) EGRA subtask 1 was a letter sound identification subtask in Nigeria and Ghana, but a letter name identification subtask in Kenya. The task was changed in Kenya after the piloting because it was observed that the cohort pupils had not been taught letter sounds. (2) As per the GEC-T guidance, WPM scores are capped at 100. (3) SeGMA subtask 1 was administered in Kenya and Ghana only because extreme floor effects were observed in Nigeria during the piloting.

In addition to these subtasks, in Kenya and Ghana girls in the benchmarking grades also completed SeGRA subtask 1 and SeGRA subtask 3.¹⁰⁹ SeGRA subtask 1 is a short reading comprehension exercise with straightforward inferential questions. It is scored as the percentage score obtained on the comprehension questions. SeGRA subtask 3 is a short essay question, scored as a percentage score based on the response's appropriateness to the task, structure, vocabulary, grammar, punctuation, and spelling.

The baseline survey was conducted between April and June 2018, at a time where pupils in Kenya were beginning the second (of three) terms of their school year and pupils in Ghana and Nigeria were beginning the third (of three) terms of their school year.

4.1.2 Pupil learning outcomes in English literacy and numeracy

Table 17 shows the aggregate baseline learning outcomes for the primary 5 learning cohort across the three countries, and by treatment assignment. Numeracy outcomes in Nigeria are lower than in Ghana and Kenya, particularly given that pupils in Nigeria did not complete the SeGMA subtask. English literacy outcomes are also extremely low in Nigeria, with the vast majority of pupils lacking even pre-literacy skills.

Table 17: Aggregate pupil learning outcomes, by country and treatment assignment

Grade	Intervention group N	Intervention group mean	Control group N	Control group mean
English literacy				
Ghana	1,003	23.3*	860	21.2
Kenya	1,226	56.4	1,093	56.1
Nigeria	1,140	2.3*	1,047	2.9
Numeracy				
Ghana	1,003	62.6	860	61.6
Kenya	1,226	70.4	1,093	69.6
Nigeria	1,140	33.6	1,047	32.7

Source: DP-2 learning assessments 2018. English literacy aggregate scores are based on EGRA. Numeracy aggregate scores are based on EGMA in Nigeria and on EGMA + SeGMA task 1 in Ghana and Kenya.

Note: Asterisks indicate where means between intervention and control groups differ significantly from one another at the following levels: *** $p < .01$, ** $p < .05$, * $p < .01$.

There are no statistically significant differences in baseline learning outcomes between the treatment and control groups for numeracy outcomes. For literacy outcomes, pupils in the treatment groups in Ghana perform slightly better than pupils in the control group, while in Nigeria pupils in the treatment group perform slightly worse than pupils in the control group. These differences are significant at the 10% level ($p < .01$). Distributions of the aggregate learning outcomes for treatment and control groups by country are shown in Annex 19.

¹⁰⁹ These tasks were not administered in the benchmarking grades in Nigeria because of extreme floor effects observed during the piloting.

Findings from the pupil diaries support the literacy results from the learning assessments. In Nigeria, pupils completed the diary exercise entirely in Hausa. Their writing in Hausa was also assessed as poor by our local researchers. While children in Nigeria wrote their daily entries in Hausa, both Ghanaian and Kenyan girls chose to use English for entries into their diaries, although Kenyan children had a better command of English than Ghanaian children. In Ghana, while pupils wrote their diaries in English, the quality of writing varied considerably. Most of the girls struggled with their spellings and basic sentence formation. However, some teachers mentioned that their students were getting better at pronouncing words and forming sentences in English. Further, some teachers gave examples of how children were now motivated to speak the English language because some children in the videos they watch during video lessons speak in English. In Kenya, the qualitative study found that children engaged in our baseline fieldwork often write about receiving books during class, and about reading books, and specifically wrote about enjoying their English and mathematics classes and enjoyed being taught well or praised in class. For example:

My day at school was very interesting. I woke up in the morning and preparing myself as usual. On the way to school met my schoolmates and kept my way up to school. When I reached at school I found my classmates' .we started reading. Our teacher came and found our books we got mathematics. We changed and then we started our lesson. When I get to school I feel happy because of the studies the teacher gave to us at the school like the studies because the teacher teaches us in a good way\ our teachers are very good at teaching they explain until we understand. [Several spellings corrected to make paragraph legible].

Student Diary, N2, Nairobi

Kenyan children, generally, stood out in their command of English and literacy skills in comparison to Ghanaian and Nigerian children. Children sometimes used metaphors and 'poetic' language when describing their days in English:

After the time was over, I was called by one of teacher. They told me that I am good at English. I was as happy as a lack [lark].

Student Diary, D7, Nairobi

4.1.3 Pupil learning outcomes by learning domains

The learning scores give an insight into pupil performance across different learning domains. As per the GEC-T guidance, proficiency levels were created for each subtask as described in Box 5. It should be noted that the short nature of the subtasks and the granularity of the scoring can make it difficult to interpret the proficiency bands. For example, on the word problems subtask for EGMA, there are only five possible scores that a pupil can achieve (0%, 20%, 40%, 60%, 80%, and 100%).

Box 5: Subtask proficiency scores bands

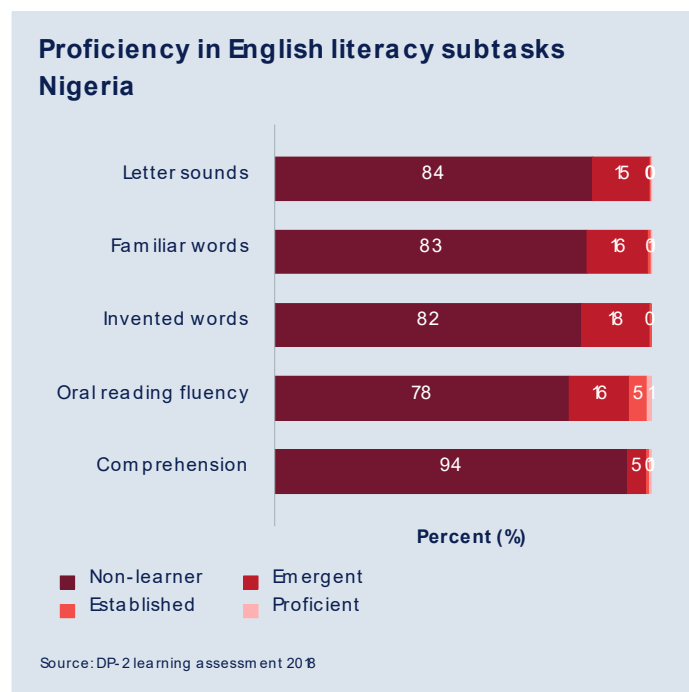
As per the GEC-T guidance provided, pupils were classified into one of four proficiency score bands for each subtask on the literacy and numeracy assessments, based on the classification of score bands provided in the table below. Reading fluency subtasks are the letter sound/name identification subtask, reading familiar words subtask, reading invented words subtask, and oral reading fluency subtasks. For all other subtasks (reading comprehension in EGRA and all subtasks in EGMA / SeGMA), the percentage score was used to classify learners into score bands.

	Reading fluency subtasks	Other subtasks
Non-learner	0–5 WPM	0%
Emergent learner	6–44 WPM	1–40%
Established learner	45–80 WPM	41–80%
Proficient learner	81–100 WPM*	81–100%

* As per the GEC-T guidance provided and as discussed in Annex 9, reading fluency subtasks are capped at 100 WPM.

English literacy

Figure 17: Proficiency in English literacy subtasks – Nigeria

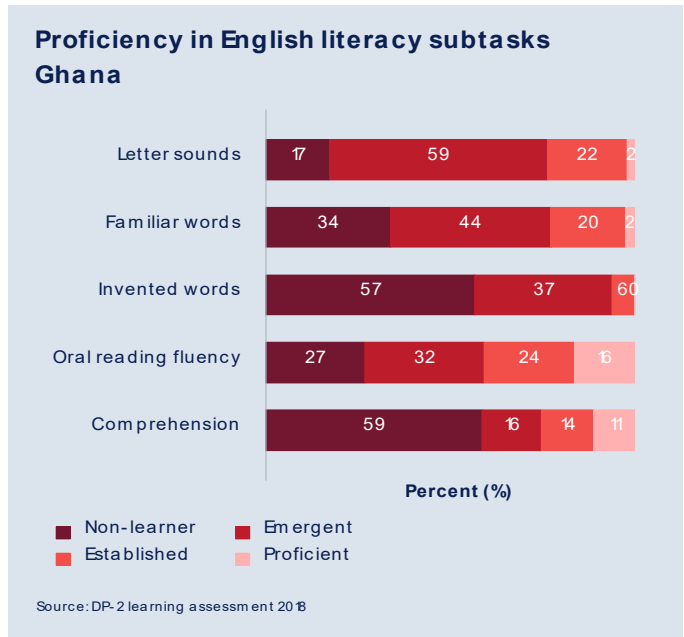


As was evident from the overall aggregate literacy score, the vast majority of pupils in Nigeria are not able to read in English, including lacking phonological knowledge of letter sounds. Over 80% of pupils can only correctly sound between zero and five letters and can only correctly read zero to five familiar or invented words. No pupil in primary 5 in Nigeria is proficient in letter sound identification, reading familiar words and reading invented words (see Figure 17).

Figure 18: Proficiency in English literacy subtasks – Ghana

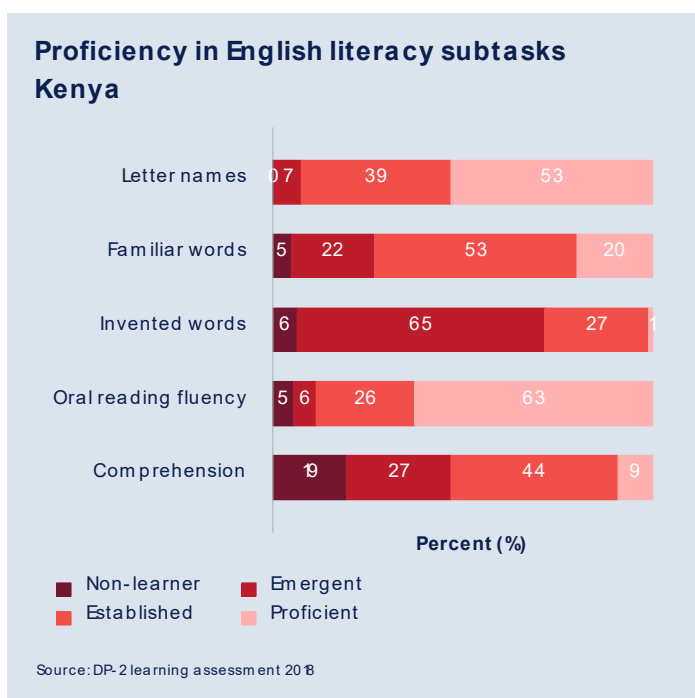
In Ghana, the majority of pupils are either non-learners or emergent learners across the different literacy domains. Pupils in primary 5 in Ghana are able to read an average of 47 WPM from a short passage (oral reading fluency) and an average of 29 WPM from a list of familiar words (see Figure 18).

The majority of pupils in Ghana are not yet reading with comprehension. Close to 60% of pupils cannot answer any of the five comprehension questions, which include simple recall questions. International research suggests that pupils need to read at about 45–60 WPM in order to be able to read with comprehension¹¹⁰



¹¹⁰ Abadzi, H. (2012) 'Reading Fluency Measurements in EFA FTI Partner Countries: Outcomes and Improvement Prospects', EFA FTI Working Paper Series, EFA FTI Secretariat accessed on 15 July 2018 from file:///C:/Users/srasulova/Downloads/2011-Reading-Fluency-Measurements-in-EFA-FTI-Partner-Countries_processed.pdf

Figure 19: Proficiency in English literacy subtasks – Kenya



Among the three countries, literacy scores in Kenya are the highest. Pupils in primary 5 in Kenya are able to read an average of 81 WPM from a short passage (oral reading fluency) and an average of 57 WPM from a list of familiar words. While 63% of pupils are classified as proficient readers based on the oral fluency subtask, only 9% of pupils are proficient at answering comprehension questions based on the text read (see Figure 19).

Figure 20: Proficiency in numeracy subtasks – Nigeria

Numeracy

In Nigeria, numeracy skills are low on average, although pupils in the sample show a range of numeracy skills. A fifth of pupils are not able to orally identify any one-digit number. At the same time, some of the pupils who are not able to orally identify any numbers are able to answer a simple word problem when the problem is read out to them in Hausa. Pupils perform particularly poorly on number pattern recognition, with 72% of pupils not able to identify the missing number in a simple pattern of four numbers increasing by one (_ , 6, 7, 8) (see

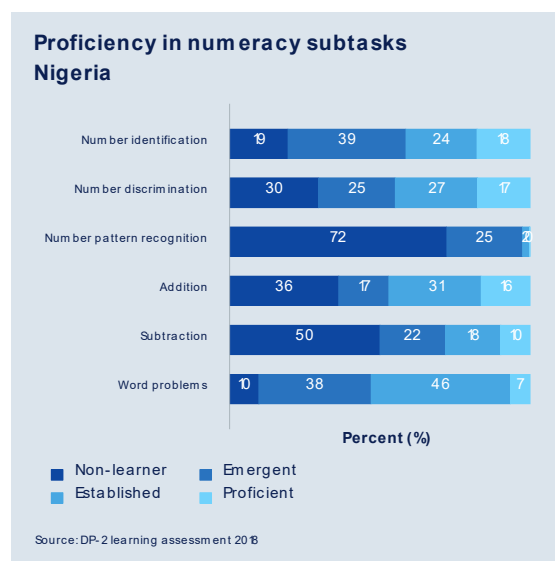


Figure 20).

In Ghana, the majority of pupils perform well on procedural items (such as number identification, simple addition, and subtraction), compared to conceptual items (such as number pattern recognition and word problems). The average primary 5 pupil in Ghana is able to correctly identify the missing number in three out of 10 patterns and is able to correctly answer three out of five word problems (see Figure 21).

When looking at advanced number operations (assessed through SeGMA), the majority of pupils can answer the first question (a two-digit addition question without carrying) but struggle with more difficult three-digit addition and subtraction questions, and all other more advanced number operations. The average score for the subtask is 9%, suggesting that pupils in Ghana are far from being considered established on this subtask.

Figure 21: Proficiency in numeracy subtasks – Ghana

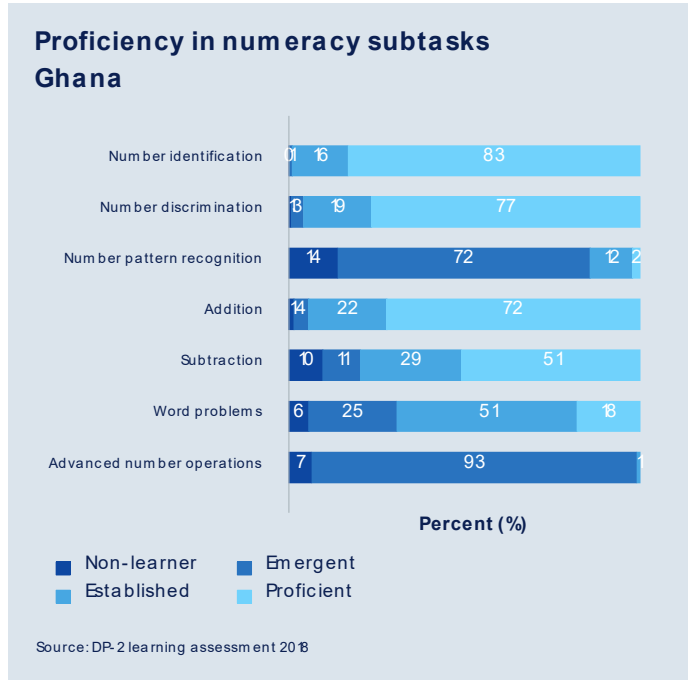
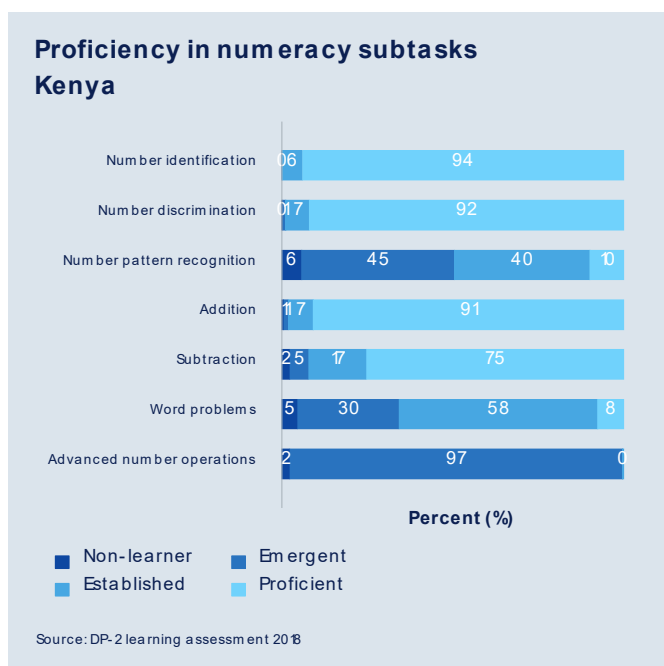


Figure 22: Proficiency in numeracy subtasks – Kenya



Similar to Ghana, the vast majority of pupils in Kenya are proficient in the more procedural tasks, but performance is worse on conceptual tasks. The average primary 5 pupil in Kenya is able to correctly identify the missing number in five out of 10 patterns and is able to correctly answer three out of five word problems. Almost all pupils fall into the emergent group on the advanced number operations subtask with an average score of 15% on the subtask, suggesting that pupils in Kenya are far from being considered established on this subtask (see Figure 22).

Qualitative assessment of potential DP contribution to pupil learning

In what follows, we present the baseline perceptions of teachers of the potential contributions of DP to learning gains. While significant changes have been made to DP-2 project design, including the focus on improved numeracy and literacy training as well as remedial classes, the evaluation of DP-1 did not find statistically significant impact of DP-1 on learning outcomes. As such, these findings should be treated as indications of potential impact to be investigated during the midline and endline rounds of research.

Nigeria

As part of the qualitative study, teachers interviewed in Nigeria collectively report that learning outcomes have improved. Evidence on improved learning is based on teachers' own judgement of pupils' classroom participation and performance in assignments, tests, and exams. One teacher reported that, out of the total number of students who took the entrance examination into JSS in the previous term, only four students failed – which in his view suggests an improvement compared to previous terms. Changes in learning outcomes are mostly attributed to the use of the learning centre for teaching (although note that some schools do not have a designated learning centre and use the head teacher's office instead). The majority of teachers believe that having audio-visual teaching and learning materials, as well as having a space where the equipment is secure is beneficial.

Improvements in literacy and numeracy are also considered to partly be the result of the DP training, although specific training on literacy and numeracy as part of DP-2 was just taking place during the

baseline data collection. As perceived by teachers, the use of audio-visual technology by trained teachers has improved lesson retention as the videos increase interest and make learning exciting for pupils. One literacy teacher recounted that he delivered a lesson on alphabet sounds using the audio-visual materials and pupils showed a great level of assimilation as they could better remember the letters and their sounds compared to previous lessons when the lessons were delivered without the audio-visual stimulation. Two head teachers noted that the application of DP teaching methods has improved the quality of teaching, stating that: *'it also increases their [pupils'] knowledge apart from making them come to school, it increases their knowledge because if a child watches it, he will remember that thing and by the grace of God the way a child will describe that thing whenever he sees it, you will be surprised and is different from when he didn't watch it and anytime they say they will teach them a particular subject and they will use the Fitila [DP] materials you will find that your class is filled up with children. By the grace of God these two years, there has been no problem'*.

Benefits of the video technology include reduced lesson delivery time, increased comprehension among pupils, and simplified explanations of complex topics. One teacher mentioned the fact that a lesson which exceeded 45 minutes previously could now be delivered effectively in 30 minutes with the use of the videos. This was also the opinion of two CAP members. In another school a numeracy teacher noted that, while using the audio-visual material to teach pupils, pupils were assessed after having watched a particular video topic and pupils performed better compared to when he taught the topic without the visual aids. Some parents from Islamic schools expressed similar views regarding the usefulness of the videos in stimulating learning.

According to SUBEB officials in Nigeria, there are observable differences between DP schools and non-DP schools. SUBEB officials interviewed assert that both transition rates and learning outcomes are better in schools where the DP is operating.

Parents, however, felt that they have not seen a noticeable improvement in literacy and numeracy based on their own observations of their children. In one of the public schools, individuals involved in CAP activities reported that, in their interactions with parents, parents assert that their children do not understand what they are being taught and thus they end up withdrawing their children to send them to Islamic schools.

Ghana

During the qualitative assessment, a few different schools in Ghana suggested that they were seeing some improvement in learning, including children speaking more in English, learning to spell better, or getting better at arithmetic. However, most of these reports citing improvements are verbal in nature, and there was less verifiable evidence to measure this change. Almost all the schools that we visited did not seem to have specific literacy and numeracy targets in place (at baseline this is to be expected) and seemed to have a more general focus on improvement.

A common reason cited for the improvement in learning outcomes was the presence of video lessons that the children were being taught with, as this method was more attractive to them and helped them to comprehend certain concepts better. Teachers in Ghana spoke about their set timetables on when to use DP materials and tools for specific subjects. Teachers also mentioned that there used to be limited

teaching and learning materials available, but now teachers are able to use maths sets, compasses, counters, and the DP materials, which helped the children. In addition, teachers generally spoke highly of how the videos were able to keep the children engaged. For example, showing children pictures of animals for them to identify the number of animals in the pictures was exciting for them. This sort of positive response usually came from the teacher, head teacher, or individuals involved in CAP activities, who were the most familiar with the project.

Some parents did mention extra classes being organised at their schools that were attended by their children, which they thought was an encouraging step and something they tried to send their children to. Some parents confirmed that they had seen some improvement in their wards' scores on numeracy and literacy. However, they usually attributed this to the DP-2 remedial classes on literacy and numeracy being organised by the school for the students. A few parents also suggested that their daughters could now read compared to before. However, in general, most parents admitted that they were not able to know if there was progress in their child's learning because they could not attend PTAs or because they themselves have a low level of education.

Kenya

Similar to Nigeria, teachers in Kenya appreciate the DP teaching aids and training and believe that it has improved teaching and learning practice. Visual aids allow teachers to make otherwise complicated topics or those that are difficult to conceptualise more tangible for the pupil. Examples given by teachers include 'digestion in the human body' and 'other countries' far away from Kenya. According to teachers, the videos have generated interest in learning and help pupils to retain facts and increase their subject knowledge. We did not find examples in our interviews with parents or children that demonstrated a connection between improved learning outcomes and DP. This may be because parents are not aware of the project, though it is difficult to establish this link at baseline. However, one parent in the CAP group whose daughter was also part of the girls' club said that the club and teaching practice have changed because of DP.

4.1.4 Subgroup analysis of learning outcomes

Pupil characteristics and contextual factors are likely to influence pupil learning through complex pathways. Previous research has identified factors such as individual and family characteristics of students (e.g. gender, age, language spoken at home, socioeconomic factors, and preschool attendance) as being associated with the likelihood that a student would experience limited learning outcomes in literacy or numeracy.¹¹¹ Students' self-reported level of engagement in their classes and receiving out-of-school tuition or extra lessons are also correlated with learning outcomes, although the correlation between extra lessons and better learning outcomes may in part be explained by other demographic factors such as students attending better-quality schools.¹¹² In addition, the type of school, the location of

¹¹¹ Friedman, T., Schwantner, U., Spink, J., Tabata, N. and Waters, C. (2016) 'Improving Quality Education and Children's Learning Outcomes and Effective Practices in the Eastern and Southern Africa Region: Main report'. Available at https://research.acer.edu.au/monitoring_learning/25

¹¹² Ibid.

the school, and the resourcing available to the school that the student attends also contribute to the likelihood that the pupil has low learning outcomes.

In this section, we first present teachers and parents' perceptions of gender differences in learning and barriers to learning, based on findings from the qualitative research. We then examine how pupil characteristics, poverty, geography, and other contextual factors may pose barriers to pupil learning for the DP-2 sample of cohort girls.

Perceptions of gender differences in learning and barriers to learning

The general impression of respondents in the qualitative baseline study was that barriers to learning were similar for boys and girls. They accept that, while historically girls were not given the same opportunities and support as boys, which has changed or is changing rapidly. In Nairobi and Kiambu, teachers felt that boys were more at a disadvantage than girls because there were several efforts by NGOs and the government at improving schooling and learning outcomes that focused on girls and neglected boys. In Kajiado, where the Masai community felt that they had traditionally treated the girl 'as a child' and not provided her with similar opportunities to go to school, respondents were of the opinion that things were changing for the better. In contrast to other counties, however, respondents in Wajir were of the opinion that barriers to girls' learning and completing their education remained. This was largely due to the perception that women should marry into another family, whereas men were an investment for their parents' future.

The general perception among respondents in Nigeria is that girls perform better than boys. The reasoning is that boys are often 'playful', while girls are dedicated and have higher attendance rates. The consensus among all the parents is that their children could perform better at numeracy and literacy.

When discussing children's performance, the responses were quite varied in Ghana. Some parents and communities mentioned that girls performed better than boys, while some stated that boys did better. In some schools, teachers believe that the support girls have received has resulted in them performing better than boys. Some parents went on to say that the boys performed better because they were able to get more time to study at home compared to girls, as girls were often busy with household chores. Further, teachers did highlight that the burden of household work was disproportionately on girls, who sometimes came to school tired and hungry, and this influenced how much they could engage in the class. There were also some claims made by teachers that boys performed better at mathematics while girls did better with languages. However, according to some teachers, DP training helped them reconsider these assumptions they were making. In addition, particularly in Sagnarigu, teenage pregnancy came up as a cause for girls having to leave their schooling across most interviews. Another barrier was menstruation, which influenced not only if girls were attending school but also if they were able to participate in class.

As touched on above, in Ghana and Kenya we found that teachers were biased toward believing that girls performed well in languages and boys naturally did well in mathematics. They were unable to explain why they thought this to be the case or what drove this opinion, and accepted that this was just the way it was.

The performances of girls and boys in numeracy and literacy, according to parents and teachers, vary from one country to another. In particular, according to respondents, girls do better in Nigeria and are generally doing well in Ghana and Kenya thanks to the help provided to them and the changing attitudes to girls' education. However, the attitudes seem to remain biased against girls in Wajir, Kenya. In Nigeria, the prevalent belief is that girls should study until secondary school and then get married. It is worth noting that by the end of secondary school girls are usually 21 years of age, which, in some countries, is perceived as the right age at which to marry. Some other barriers to learning outcomes that are gendered are teenage pregnancy, early marriage, and menstruation (in some communities in Kenya and Ghana), which affect girls' attendance and performance in the classroom. Moreover, girls are suggested as having more chores to perform and therefore come to school late, tired, and hungry.

Notwithstanding the above, since a boys' survey was not included in the evaluation design we cannot compare rates of involvement in household chores between boys and girls, limiting our ability to support a claim that girls are more affected than boys by household chores except in reference to the perceptions of parents and teachers.

Barriers to pupil learning

Table 18 and Table 19 show the average literacy and numeracy scores (for both treatment and control) by different educational marginalisation characteristics and potential barriers. While this breakdown is informative, the findings need to be interpreted with caution. Correlations between characteristics/barriers and learning outcomes may be reflective of other structural factors. For example, in our sample in Nigeria orphans appear to have higher learning outcomes than the average pupil. However, it may be that many orphans are not in school in the first place and that those in our sample thus represent the relatively advantaged few. We show in the full multivariate regression models (see Annex 19) that once we control for other factors such as the household's poverty status, being an orphan is no longer associated with better learning outcomes. We would therefore suggest focusing on the main influencing factors presented in the section below based on the multivariate regression models.

Table 18: Learning scores among key subgroups

	Nigeria		Kenya		Ghana	
	Average literacy score	Average numeracy score	Average literacy score	Average numeracy score	Average literacy score	Average numeracy score
All girls	2.6	33.1	56.3	70.0	22.3	62.1
Single orphan	3.7**	39.0***	52.0***	67.7***	24.4	62.4
Living without both parents	4.3**	37.7**	50.7***	67.7**	25.2**	62.6
Living in female-headed household	2.9	38.0*	55.1	69.4	25.4*	62.0
Difficult to afford for girl to go to school	2.2	33.3	56.0	69.7	20.3***	62.0
Household does not own land for themselves	3.1***	35.2***	57.3**	70.3	-	-

	Nigeria		Kenya		Ghana	
	Average literacy score	Average numeracy score	Average literacy score	Average numeracy score	Average literacy score	Average numeracy score
Likely to be extremely poor (based on extreme poverty rate of \$1.90/day)	1.1***	25.2***	43.6***	64.5***	11.5***	59.4***
LOI is different from mother tongue	5.7***	44.6***	55.7*	69.8	22.4	62.3*
Girl does not speak LOI	-	-	37.0***	61.1***	15.4***	59.2***
Head of household has no education	1.5***	27.8***	43.6***	64.9***	19.8***	61.6**
Primary caregiver has no education	1.4***	26.7***	44.3***	65.4***	20.5***	61.9
Living with one parent only	2.9	35.3	55.7	69.4	22.0	62.4
Rural location	0.9***	24.5***	-	-	-	-
Sample size (N)	1,126	1,028	1,091	971	998	859

Source: DP-2 learning assessments and household survey, survey 2018.

Note: 'Double orphan', 'married', 'mother u18', and 'mother u16' are excluded because these subgroups have fewer than 60 observations in all countries. 'Girl does not speak LOI' is excluded in Nigeria because the subgroup has fewer than 60 observations. 'Household does not own land for themselves' is excluded in Ghana due to the large proportion (18%) of 'don't know' responses on this variable. (2) Asterisks indicate whether learning outcomes among the key subgroup differ significantly from the relative comparison group at the following levels: *** p<.001, ** p<.05, * p<.01.

Table 19: Learning scores among pupils who face potential barriers

	Average literacy score	Average numeracy score	Average literacy score	Average numeracy score	Average literacy score	Average numeracy score
	Nigeria		Kenya		Ghana	
All girls	2.6	33.1	56.3	70.0	22.3	62.1
Home / community level						
Safety and distance to school						
Fairly or very unsafe travel to schools in the area (caregiver report)^	-	-	58.6***	71.0**	23.3	63.8*
Doesn't feel safe travelling to/from school (girl report)	3.1	30.8	54.6	68.4**	24.2	60.0*
Closest primary school is further than a 30-minute walk away^	1.5***	31.6	51.7***	68.8	27.3**	61.8
Closest secondary school is further than a 30-minute walk away^	1.2***	25.7***	48.2***	67.7***	20.2***	61.2***
Household chores						
High chore burden (spends a quarter of the day / a few hours or more on chores)^	1.5	30.7***	52.7***	68.3**	23.9**	62.3

	Average literacy score	Average numeracy score	Average literacy score	Average numeracy score	Average literacy score	Average numeracy score
	Nigeria		Kenya		Ghana	
Helps with agricultural work, family business or work outside the home [^]	1.6***	27.6***	51.1***	68.3***	19.4***	61.8*
School level						
Safety at school						
Doesn't feel safe at school	3.2	27.4**	46.0	63.7***	22.2	57.1
School facilities						
PTR over 40	1.4***	26.6***	55.1***	69.9	21.2	60.4***
School has no female teachers	0.8***	23.2***	40.5***	64.1***	9.7***	56.9***
School does not have access to water	1.5***	24.8***	-	-	23.3	59.2***
School does not have separate toilets for girls	1.1***	24.1***	-	-	25.3**	61.7
School does not have access to electricity	0.8***	23.1***	-	-	15.6***	61.4
Sample size for indicators from household survey (marked with ^) (N)	1,126	1,028	1,091	971	998	859
Sample size for indicators from girl or school survey (N)	1,140	1,047	1,226	1,093	1,003	860

Source: DP-2 learning assessments, household survey, girls' survey, and school survey 2018.

Notes: (1) Subgroups are excluded (-) if they have fewer than 60 observations. (2) Asterisks indicate whether learning outcomes among the key subgroup differ significantly from the relative comparison group at the following levels: *** p<.001, ** p<.05, * p<.01.

We further unpack the relationship between learning outcomes, pupil characteristics, and barriers to learning through multivariate regression models. These models are helpful to identify the statistical significance of correlations between learning outcomes and a range of influencing factors that help explain pupils' performance. We include pupil-, household-, and school-level characteristics in our model. The inclusion of variables on teaching quality is limited because of the small sample size of teachers, and because teachers are not linked with pupils (i.e. we do not know which sampled pupils, if any, are taught by the sampled teacher). We also did not include a variable to measure attendance. As we discuss in Chapter 5, attendance data is available only from schools where teachers keep attendance registers. This is more likely to be the case for better-managed schools, so we would risk biasing our model by including this variable. Given that this is the baseline stage, this model is cross-sectional, meaning that all indicators are measured at the same time.

In Figure 23, Figure 24, and Figure 25 below, we present the main factors that are associated with learning outcomes for Nigeria, Ghana, and Kenya, respectively. The graphs show the standard deviation change in the learning outcome that would result from a one standard deviation change in the covariate.¹¹³ The graphs show point estimates and 95% confidence intervals. When the confidence interval does not overlap with zero, this is an indication that a statistically significant relationship exists between the covariate and the learning outcomes. Full regression models are presented in Annex 19.

¹¹³ Coefficients have been standardised so that they can be more easily compared against each other.

Several findings are evident from these models, as well as from the qualitative research on barriers to pupil learning.

Figure 23: Main factors associated with learning outcomes – Nigeria

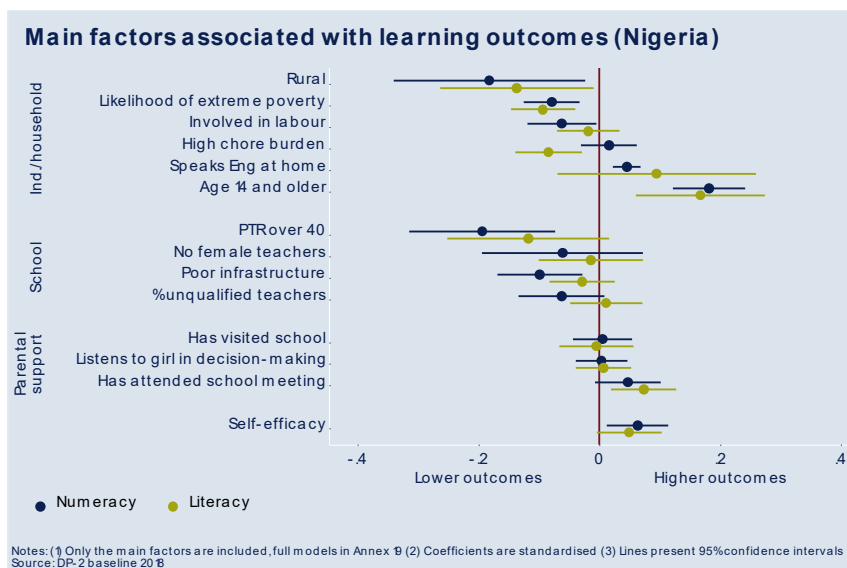


Figure 24: Main factors associated with learning outcomes – Kenya

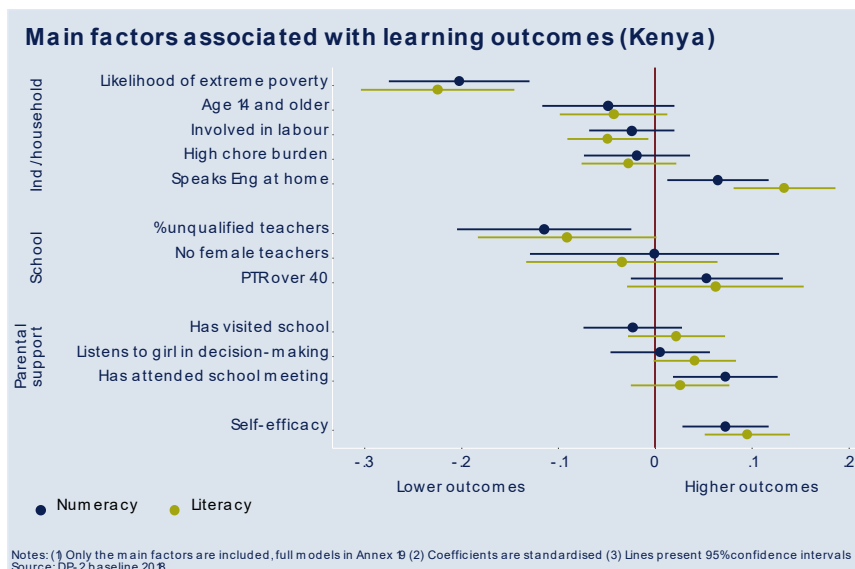
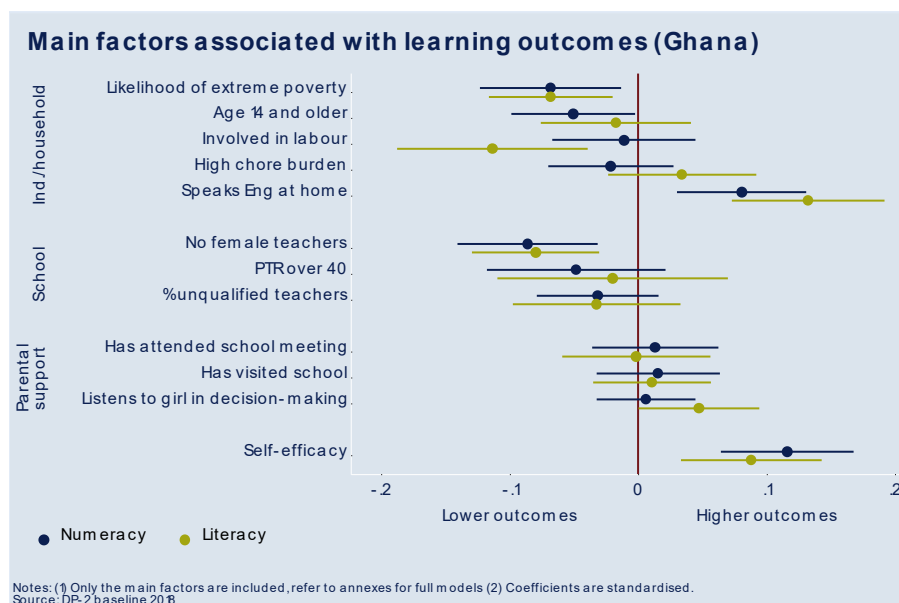


Figure 25: Main factors associated with learning outcomes – Ghana



Pupil age: In Nigeria, pupils who are relatively older (14 years and older) than the average pupil have higher literacy and numeracy outcomes, while in Ghana older pupils have lower numeracy outcomes. In Kenya, there is no significant relationship between age and learning outcomes.

Exposure to English: Findings from the regression show that pupils who speak English at home, either as their mother tongue or as one of several languages spoken at home, have significantly higher English literacy outcomes (and numeracy) in Ghana and Kenya compared to pupils who do not speak English at home.

In Nigeria, there is no statistically significant correlation between speaking English at home and English literacy outcomes, although there is a significant correlation between speaking English at home and numeracy outcomes and findings for English literacy are in the expected direction. Only a very small proportion of pupils in Nigeria speak English at home, which means that it may be difficult to detect a significant relationship if one exists. The proportion of caregivers who report that their children speak English as the main language at home is low across all countries. However, children in Kenya and Ghana are much more likely to be speaking English as an additional language at home compared to children in Nigeria, as reported by their caregivers. Previous research has found that alignment between the language spoken at home and the LOI is correlated with better literacy outcomes.¹¹⁴ In addition, Nigerian children are also less likely to hear English at school. As discussed in Chapter 3, Nigerian children are likely to have less exposure to English given that the *de facto* LOI in the majority of schools is Hausa, and that teachers were found to be more comfortable communicating in Hausa.

¹¹⁴ Fehrer and Michaelowa (2009), UNESCO (2010), and Garrouste (2011), all cited in Friedman *et al.* (2016).

Table 20: Proportion of pupils who speak English at home

	Nigeria	Kenya	Ghana
English is the main language spoken at home	0.0	1.5	1.0
English is an additional language spoken at home	1.0	35.1	30.5

Source: DP-2 household survey 2018, based on caregiver reports.

Poverty and economic disadvantage: As was discussed in Chapter 3, poverty and geography/location are the most prevalent barriers faced by large proportions of the sample. Our regression results show that, in all three countries, pupils from households that are more likely to be extremely poor have lower learning outcomes for both literacy and numeracy. In Nigeria, pupils from households in rural areas also have significantly lower learning outcomes.

In support of these quantitative findings, the qualitative study found that poverty and economic disadvantage were consistently reported as key barriers to education by head teachers, teachers, parents, community members and leaders, and the MoE in all three countries. Economic disadvantage came up as the primary reason why pupils occasionally miss school. The majority of Nigerian households were poor, while in Kenya the levels of poverty were observed to be higher in Wajir in comparison with the other schools and communities visited. In Wajir, attacks, curfews, displacement, and migration due to pastoralist activities were some of the reasons discussed by the community as barriers to schooling. The economic conditions are such that children in Wajir are faced with hunger or lack of school materials (e.g. uniforms and books), with learning outcomes being affected as a result. In their diaries, girls reported witnessing their peers being sent home for not having paid school fees. Moreover, teachers mentioned pupils who struggle financially and often depend on donations or assistance from the government in the form of cash transfers.

When children go to school, hunger or lack of food may inhibit them from paying attention, participating in class, and learning in general. In their diaries, girls in Kenya were asked to write about what made them happy or sad, and several diary entries mentioned that a meal at the end of the day or their parents coming home with meat or a hot dinner made them happy, also mentioning that when they did not have food for breakfast or dinner they were unhappy. Schools recognise this as a barrier and in schools with feeding programmes this was observed to improve attendance. In Nigeria, where the majority of households are impoverished, one parent and a teacher from an urban integrated Islamic school felt that the inability of parents to provide food for their children is a hindrance to learning. This was a school where the government school feeding programme is not being implemented.

Connected to economic disadvantage is the role children play in supporting their family. Findings from both the quantitative and qualitative research show that children either participate in the informal labour market (e.g. sand harvesting or hawking), help their parents with agricultural work or spend large amounts of time on household chores. Our regression results show some support for a relationship between household chores/labour and poorer learning outcomes: in Kenya and Ghana, involvement in agricultural work, a family business, or work outside the home is associated with poorer literacy outcomes, while in Nigeria it is associated with poorer numeracy outcomes. In addition, spending a quarter of a day or more on household chores is associated with lower literacy outcomes in Nigeria. Findings from the qualitative research suggest several pathways through which children's involvement in work might affect their learning outcomes. Concerned teachers shared that they find children who come

to school late because they have had to complete their chores look tired and sleepy in class and fail to participate. They also do not have the time to read or study when they go home, nor do they have time to engage in leisure or play. Respondents in the qualitative study perceive that household chores disproportionately affect girls' learning (especially in Ghana and Kenya), even though they do come to school. Boys are reported to do more physical work such as grazing cattle or harvesting sand, and as a result tend to be absent from school for several days. Poor economic conditions often result in late coming or non-attendance. Some parents feel discouraged from having their children continue schooling due to lack of funds.

School infrastructure and adequate numbers of qualified teachers: In Chapter 3, we noted how infrastructural limitations and a shortage of teachers are a concern (particularly in Nigerian schools). In our regression models, we find some evidence that poor infrastructure and high PTRs are associated with poorer learning outcomes in Nigeria, particularly for numeracy. In the qualitative research, teachers in Nigeria reported feeling overwhelmed by having to teach classes that are overcrowded owing to the high PTR. In addition, in Kenya we find evidence that pupils perform more poorly, particularly in numeracy, if the school has a lower proportion of qualified teachers.

Furthermore, it cannot be assumed that DP-trained teachers will be motivated to adopt and continue adopting and mastering new teaching practices without appropriate leadership and management from head teachers, with support from school governance representatives, resource teachers, as well as local MoE officials. Effective school leadership is suggested to be an important factor in determining whether DP-2 training will lead to the improved subject and pedagogical knowledge of teachers that would then improve students' learning outcomes.

In addition, one teacher in Nigeria reported that the lack of toilets is a challenge for pupils, especially for older girls. Studies suggest that access to usable toilets can increase school enrolment, attendance rates, and educational outcomes.¹¹⁵

One of the community-owned schools that shares its space with other schools raised concerns about the lack of a dedicated office in which to mount the learning devices (TV and player). The lack of such a facility has resulted in the equipment not being used as often as needed. Referring to the infrastructural challenges facing the school, a teacher noted the following: '*one of the greatest challenges we are having today, is space. The classes are too choked up and also no sports field for physical health education, we even have to cross the road to go to another school just for that and also, we lack classroom chairs.*'

Conducive home environment and supportive parents: In our regression models, there is inconsistent evidence regarding whether parents having visited their child's school, having attended a meeting at the school, and listening to the girl when making decisions regarding her future are associated with learning outcomes. The results differ by country and outcome. However, the ways in which parents support their children's education may be complex and are unlikely to be fully captured by these indicators. In the qualitative research, parents reported that they engage in children's education by monitoring their children's performance at school. Parental support is also demonstrated by efforts made to provide materials that their children need for school, such as uniforms and books. In terms of academic support, it appears that most parents rely on their children's older siblings to assist. Most teachers feel that parents'

¹¹⁵ See, for example, Jasper, C., Le, T.T. and Bartram, J. (2012) 'Water and sanitation in schools: a systematic review of the health and educational outcomes'. *International journal of environmental research and public health*, 9(8), pp. 2772–2787.

lack of exposure to education is one of the reasons that limit the extent to which they are able to engage in or support their children's education.

Self-efficacy: In all three countries, higher levels of self-efficacy are associated with higher learning outcomes. This finding provides some initial support regarding a link between self-efficacy and learning outcomes, although it seems likely that both of these indicators could be influenced by other factors such as problem-solving skills, for example. In future evaluation rounds, we will be able to examine more clearly how *changes* in self-efficacy and learning outcomes are related.

Summary

This picture of learning levels in numeracy and English literacy at baseline confirms that the core objective of DP-2 of improving pupil learning levels is highly relevant in these three countries, as pupils are not performing at the level expected by the curriculum. This is the case particularly for English literacy in Ghana and Nigeria and for numeracy in Nigeria. Pupils who are lacking the foundational building blocks for literacy and numeracy are unlikely to improve if teachers continue to focus on the content that is expected by the curriculum. The remedial classes that DP-2 is incorporating are likely to be particularly relevant in this regard but are unlikely to be sufficient if the majority of pupils are not performing at expected levels. DP-2 in this regard is tailoring the literacy and numeracy training to what pupils (and teachers) know.

A range of contextual factors is likely to affect learning outcomes for pupils in the three countries. Some contextual factors, and especially extreme poverty, are not within the scope of DP-2 and are likely to limit the impact that the project has on learning outcomes. As DP-2 focuses on the school and improving children and parents' perception of education, it plays no direct role in poverty alleviation. Therefore, it is unlikely to provide a solution to extremely poor parents and students who increasingly may have positive attitudes toward schooling but still be unable to attend school regularly or set aside time to learn if they do not have the means to provide for themselves.

4.1.5 Target setting for future evaluation rounds

In this section, we outline the learning outcome targets that the treatment schools will aim to achieve by the midline and endline evaluation points, which is after one year and after two years of project implementation. To determine these targets, learning assessments were administered to a group of pupils who are currently one grade above the learning cohort (primary 6) and to a group of pupils who are currently two years above the learning cohort (primary 7 in Kenya and JSS-1 in Ghana and Nigeria). Learning outcomes for these groups of pupils are intended to provide an estimate of the learning outcomes that the learning cohort would be expected to achieve at midline and endline in the absence of DP-2.

The GEC-T MEL guidance stipulates that the learning target for all GEC-T projects should be 0.25 standard deviations per year of implementation for each learning outcome. There are several points to consider when setting this target based on the benchmarking approach.

- **The learning target (0.25 standard deviations) seems ambitious, at least for numeracy outcomes:** A recent systematic review reported on a meta-analysis of effect sizes for interventions to improve learning outcomes in low- and middle-income countries.¹¹⁶ The average effect size of the impact of structured pedagogy interventions¹¹⁷ on language outcomes¹¹⁸ was 0.23 standard deviations, while for numeracy outcomes it was 0.14 standard deviations. Most of the interventions included in the review were aimed at the early primary school grades (primary 1–3), but the limited evidence presented for interventions targeting upper primary or secondary grades did not suggest that effect sizes would be larger for this group.¹¹⁹ In line with this international evidence, we present learning targets of 0.15 standard deviations for numeracy in the tables below, along with the targets for 0.25 standard deviations. We would propose that DP sets a target of 0.25 standard deviations for literacy and 0.15 standard deviations for numeracy.
- **Gains in learning outcomes are likely to take time to materialise:** According to the project ToC, learning outcomes are expected to improve as a result of improvement in teaching quality – specifically in teaching primary English and mathematics, DP-2’s new TPD focus – and as a result of girls’ soft skills, motivation, and self-efficacy improving. It may, therefore, take time for gains in learning outcomes to materialise, and it may be ambitious to expect to see an impact of 0.25 standard deviations at midline after only a year of project implementation.
- **The standard deviation (dispersion) across different samples is not always similar:**
 - The benchmarking approach assumes that the variance in test scores of the benchmarking sample is similar to the variance in test scores of the cohort sample. Should the variance in test scores for the benchmarking sample be different to that of the cohort sample, it is possible that the percentage point target presented below is different to the percentage point target that the cohort treatment group would need to achieve in order to achieve a 0.25 standard deviation target. Our evaluation design is based on a DID approach, which allows us to robustly evaluate the impact of the intervention using the results from the cohort sample. We, therefore, propose to review the percentage point targets at midline and endline based on the actual results that the cohort sample achieves at midline and endline.
 - Variances in test scores differ across countries. This means that an intervention that delivers the same improvement in learning outcomes in absolute terms is deemed to be less effective in a context where variances in test scores are high.¹²⁰ In our evaluation, this is evident in the numeracy assessment where the variance in numeracy scores is larger in Nigeria than in Ghana and Kenya. This means, for example, that if pupils in the treatment group scored 2% higher on the numeracy assessment than pupils in the control group in all countries, the target would be achieved in Kenya and Ghana but not in Nigeria.¹²¹ At midline and endline, it will be important to not only report the impact of the

¹¹⁶ Snilstveit *et al.* (2015).

¹¹⁷ Structured pedagogy interventions were defined as interventions that develop new content and instructional approaches and train teachers on how to implement these, often combined with provision of teaching and learning materials to teachers and pupils, and ongoing monitoring and mentoring.

¹¹⁸ The systematic review considered language outcomes in any language.

¹¹⁹ For language outcomes, the average effect size for interventions in primary 4–6 was 0.21 standard deviations (based on four studies) but heterogeneity was high. For numeracy outcomes, the average effect size for interventions in primary 4–6 was 0.21 standard deviations (based on four studies), and for interventions in primary 7–11 was 0.13 standard deviations (based on three studies), but again heterogeneity was very high in both cases.

¹²⁰ See <http://blogs.worldbank.org/impac-tevaluations/how-standard-deviation-cautionary-note-using-sds-compare-across-impact-evaluations>. Here, Singh also shows how standard deviations on the PISA numeracy assessment differ across countries.

¹²¹ Based on a target of 0.15 standard deviations.

intervention in terms of standard deviations but to also consider improvements in absolute terms or in terms of the additional skills that pupils have acquired.

Below, we provide the learning targets for English literacy and numeracy for each country. The target can be interpreted as the improvement in the percentage point score that the treatment group needs to achieve over and above the control group. In the case of the reading fluency subtasks that are measured using a WPM score, the percentage point score target translates directly into a WPM target. For example, an impact of two percentage points on oral reading fluency would mean that pupils in the treatment group read 2 WPM more than pupils in the control group.

Table 21: Learning targets for English literacy

Grade	Intervention group mean	Control group mean	Standard deviation in the intervention group	Standard deviation in the control group	Target impact (T=0.25sd)
Nigeria					
Primary 5	2.3	2.9	5.709	8.527	
Primary 6	4.2		8.047		2.0
Primary 7	8.1		11.078		2.8
Kenya					
Primary 5	56.4	56.1	18.693	21.675	
Primary 6 (incl. SeGRA task 1 & SeGRA task 3)	53.3		15.153		3.8
Primary 7 (incl. SeGRA task 1 & SeGRA task 3)	59.8		14.115		3.5
Ghana					
Primary 5	23.3	21.2	21.694	21.224	
Primary 6 (incl. SeGRA task 1 & SeGRA task 3)	24.2		19.954		5.0
Primary 7 (incl. SeGRA task 1 & SeGRA task 3)	32.8		20.567		5.1

Table 22: Learning targets for numeracy

Grade	Intervention group mean	Control group mean	Standard deviation in the intervention group	Target impact (T=0.25sd)	Target impact (T=0.15sd)
Ghana					
Primary 5	61.7	62.6			
Primary 6	65.7		13.599	3.4	2.0
Primary 7	68.1		10.501	2.6	1.6
Kenya					
Primary 5	70.4	69.6			
Primary 6	73.6		11.532	2.9	1.7
Primary 7	77.5		10.638	2.7	1.6
Nigeria					
Primary 5	33.6	32.7			
Primary 6	43.5		24.839	6.2	3.7
Primary 7	52.0		22.878	5.7	3.4

4.2 Self-efficacy outcome

Self-efficacy¹²² is an intermediate outcome indicator for DP-2. A contribution claim of DP-2 is that girls' clubs, together with other DP-2 activities, lead to improved girls' life skills and self-efficacy – which in turn improve their school attendance and learning outcomes. As such, the expected outcome is that girls who participate in DP-2 will develop confidence, skills, and attitudes that can enable them to succeed at school. The DP-2 logframe places self-esteem and self-efficacy at the final outcome level, alongside other learning outcomes. This was done intentionally to reflect the fact that growing self-confidence, motivation, knowledge, and skills for life (that girls participating in the clubs would develop to an even greater degree but that we expect all girls exposed to more gender-responsive schools and classrooms and more supportive teachers, parents and communities to develop to some degree) would inspire and enable girls to engage more effectively academically, learn more, and develop their agency/self-efficacy. So, while one could argue that increased self-esteem and self-efficacy leads to improved learning outcomes, one could also argue the inverse of that.

DP-2 has provided a broad definition of *self-efficacy* as an outcome that refers to improving the self-esteem, confidence, and life skills of marginalised girls. However, given the broad nature of this definition it is not evaluable. Furthermore, self-efficacy as a concept is not something that lends itself easily to being measured by a single indicator (as compared to, for example, learning outcomes as presented above). As such, we present in this section both quantitative and qualitative approaches to the measurement of self-

¹²² We are aware that self-efficacy is a concept that relates to a number of other concepts such as confidence and self-esteem. The scope of this report does not allow us to discuss the differences and similarities of these concepts but we can suggest some clarifications here. For example, according to Bandura confidence refers to strength of belief but does not necessarily specify what the certainty is about and is therefore part of self-efficacy, which includes both an affirmation of a capability level and the strength of that belief. Self-esteem is slightly different as it is a static feeling while self-efficacy varies depending on the task at hand.

efficacy, and it is the combination and triangulation of these findings that will be used to track progress against this outcome throughout the evaluation.

In this section, we present findings from the quantitative and qualitative research on girls' self-efficacy. First, we provide a definition of self-efficacy in general and then in the context of DP-2. We go on to describe the quantitative methods used to estimate girls' self-efficacy and present baseline findings on various subgroups. Thereafter the qualitative approach and findings are presented.

4.2.1 Defining self-efficacy

Self-efficacy grew out of the psychological research of Bandura,¹²³ who defined self-efficacy as people's judgements of their capabilities to organise and execute courses of action required to attain designated types of performance. This concept has two dimensions. The first is a *belief* about one's capability, which, as such, does not necessarily match one's actual capability in a specific domain. Second is the idea that individuals make use of their efficacy judgements in reference to some *goal* ('attain designated types of performances'). Later, Bandura (in 1986 and 1997¹²⁴) advanced his *social cognitive theory*, in which people are viewed as self-organising, proactive, self-reflecting, and self-regulating rather than as solely reactive organisms or products of environmental influences. From this perspective, people are seen as agents of their circumstances, not just passive recipients.

We assume that, in the context of Nigeria, Ghana, and Kenya, children's self-efficacy is largely bounded by the adults in their surroundings where children are likely to constitute the wider family, household, and community instead of being seen as active members. Therefore, children's beliefs in their own capabilities and abilities to make use of their judgements of themselves in pursuing goals will largely be both hindered and promoted by others rather than being primarily shaped by children themselves. However, this is not to suggest that the children in this cohort are lesser agents; on the contrary, we acknowledge that these children are active agents of their lives and those of their families and households whose contribution to their well-being is doubtless.

In the context of this study, which has taken place primarily in schools, self-efficacy can be explained as girls' judgements and views of their own capabilities to study and use of these capabilities to achieve their educational aspirations and goals. If children have a strong sense of self-efficacy, then they have the skills and knowledge (or will develop them) to master tasks at school and home. Even if the solution does not come easily, having a strong self-efficacy helps children work harder and look for ways to gain the skills or knowledge that it takes to solve problems and not to give up. In DP-2's assumptions, girls' clubs (as well as improved and gender-sensitive teaching) are seen as a mechanism to boost children's self-efficacy. In this section, we discuss the notion of self-efficacy from the children's own points of view. This is done using quantitative analysis and complementing those results with findings from the qualitative study.

¹²³ Bandura, A. (1977) 'Self-efficacy: toward a unifying theory of behavioural change'. *Psychological Rev.* 84:191–215; Bandura, A. (1986) *Social foundations of thought and action: a social cognitive theory*. Prentice Hall, Englewood Cliffs.

¹²⁴ Bandura, A. (1997) *Self-efficacy: The exercise of control*. Freeman, New York.

Quantitative approach to estimating self-efficacy

The girls' survey contains a set of questions that was asked to each of the cohort girls. The sections that comprise the girls' module are: 1) school and personal; 2) feelings and attitudes; 3) life skills; 4) self-efficacy; 5) decision making; and 6) functioning. With some exceptions, the majority of questions use a Likert scale to evaluate whether a girl strongly agrees, agrees, disagrees, or strongly disagrees with a statement. In some sections, an option 'neither agree nor disagree' was also given. Some of the questions asked in the girls' module are analysed individually, while others, like all the questions contained in the section on self-efficacy, are used to form a composite score.

The GSE scale is a 10-item psychometric scale that is designed to assess self-belief in the ability to cope with the demands of life. The scale was initially designed by Jerusalem and Schwarzer,¹²⁵ based on Bandura's 1977 work, and was constructed specifically to measure personal agency, i.e. the belief that one's actions are directly responsible for successful outcomes. The statements that the girls had to respond to in the girls' module are found in Table 23.

Table 23: Psychometric scale

GSE scale statements
If someone opposes me, I can find ways to get what I want
When I am confronted with a problem, I can usually find several solutions
If I am in trouble, I can usually think of a solution
If something unexpected were to happen, I could deal with it
I can always manage to solve difficult problems if I try hard enough
It is easy for me to stick to my aims and accomplish my goals
I can remain calm when facing difficulties because I can rely on my coping abilities
I can usually handle whatever comes my way
Thanks to my resourcefulness, I know how to handle unforeseen situations
I can solve most problems if I invest the necessary effort

A concern that arises when measuring self-efficacy is that it can be difficult to separate external circumstances and internal attitudes. For example, if a girl believes that she will not be able to attend university in the future, this may be an accurate, objective assessment of her circumstances, or it may be a reflection of her attitudes, or it could be some combination of the two. The GSE tackles this issue by

¹²⁵ Jerusalem, M. and Schwarzer, R. (1981) *General Self-Efficacy (GSE) Scale*.

asking more abstract types of question targeted specifically at self-efficacy. This presents a different concern as these types of question can be challenging for children to understand and process. Nevertheless, the analysis on the responses to these statements shows that there is consistency in the girls' responses.

A self-efficacy score was constructed for each of the cohort girls, based on their responses to the 10 statements, using factor analysis. This analysis allows the use of the observable variables presented in Table 23 to construct a single measure of the underlying unobservable latent trait we are interested in, i.e. self-efficacy. This analysis was conducted on the girls from all three countries at once to ensure that girls across all three countries were kept on the same 'self-efficacy' scale to allow for comparisons across countries.

GSE scores across all three countries and between treatment and control groups are relatively similar, coming in between 60 and 70 on a scale that runs from 0 to 100. Table 24 presents the average self-efficacy score for the girls in each country. In all three countries the self-efficacy scores are balanced across treatment and control groups (i.e. there are no statistically significant differences between them).

Table 24: Self-efficacy, by country and treatment assignment

Country	Intervention group mean	Control group mean
Self-efficacy score (out of 100)		
Nigeria	67.1	66.1
Kenya	61.0	60.6
Ghana	64.4	64.9

Source: Girl module 2018

Note: Statistical significance is denoted by *, **, and *** for the 10%, 5% and 1% levels, respectively.

Table 25 presents each of the GSE statements by country and intervention group.

Table 25: GSE statements, by country and intervention group

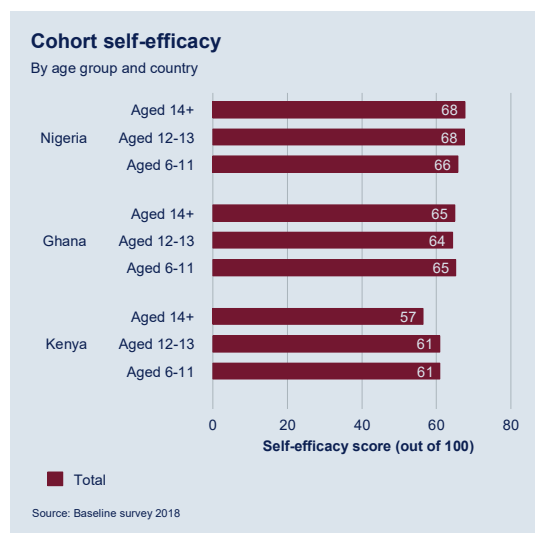
Statement	Options	Nigeria		Kenya		Ghana	
		Intervention	Control	Intervention	Control	Intervention	Control
If someone opposes me, I can find ways to get what I want	<i>Strongly disagree</i>	4.07%	3.62%	9.68%	11.76%	7.69%	5.87%
	<i>Disagree</i>	11.57%	10.56%	26.23%	27.87%	20.34%	18.62%
	<i>Agree</i>	59.04%	61.68%	44.28%	38.28%	40.36%	45.79%
	<i>Strongly agree</i>	25.32%	24.14%	19.81%	22.08%	31.61%	29.72%
When I am faced with a problem, I can usually find several solutions	<i>Strongly disagree</i>	1.63%	1.47%	4.93%	6.56%	5.27%	4.97%
	<i>Disagree</i>	8.95%	10.46%	16.37%	15.72%	16.23%	17.60%
	<i>Agree</i>	59.40%	62.56%	52.73%	46.29%	43.73%	46.30%
	<i>Strongly agree</i>	30.02%	25.51%	25.97%	31.44%	34.77%	31.12%
If I am in trouble, I can usually think of a solution	<i>Strongly disagree</i>	1.36%	2.05%	4.49%	6.65%	5.58%	4.21%
	<i>Disagree</i>	8.68%	9.48%	13.91%	15.04%	17.18%	17.73%
	<i>Agree</i>	59.04%	61.68%	51.14%	45.90%	42.68%	45.41%
	<i>Strongly agree</i>	30.92%	26.78%	30.46%	32.40%	34.56%	32.65%
If something unexpected were to happen, I could deal with it	<i>Strongly disagree</i>	5.52%	5.47%	9.51%	12.05%	7.38%	6.51%
	<i>Disagree</i>	23.87%	21.31%	26.76%	27.00%	25.61%	25.00%
	<i>Agree</i>	51.27%	53.96%	42.61%	37.90%	39.09%	43.37%
	<i>Strongly agree</i>	19.35%	19.26%	21.13%	23.05%	27.92%	25.13%
I can always manage to solve difficult problems if I try hard enough	<i>Strongly disagree</i>	1.08%	1.66%	6.16%	7.14%	4.21%	4.08%
	<i>Disagree</i>	7.50%	5.77%	14.00%	12.63%	14.65%	15.42%
	<i>Agree</i>	58.32%	66.47%	46.83%	43.88%	46.05%	44.01%
	<i>Strongly agree</i>	33.09%	26.10%	33.01%	36.35%	35.09%	36.48%
It is easy for me to stick to my aims and accomplish my goals	<i>Strongly disagree</i>	0.72%	0.68%	2.90%	4.82%	2.53%	3.19%
	<i>Disagree</i>	4.97%	4.50%	12.15%	14.08%	11.28%	12.88%
	<i>Agree</i>	58.50%	64.52%	50.00%	46.19%	50.37%	52.04%

Statement	Options	Nigeria		Kenya		Ghana	
		Intervention	Control	Intervention	Control	Intervention	Control
I remain calm when facing difficulties because I can rely on my coping abilities	<i>Strongly agree</i>	35.80%	30.30%	34.95%	34.91%	35.83%	31.89%
	<i>Strongly disagree</i>	1.54%	1.76%	7.75%	10.41%	3.27%	3.32%
	<i>Disagree</i>	8.41%	8.60%	24.56%	26.04%	17.91%	16.84%
	<i>Agree</i>	64.83%	65.98%	44.98%	40.31%	50.26%	48.85%
I can usually handle whatever comes my way	<i>Strongly agree</i>	25.23%	23.66%	22.71%	23.24%	28.56%	30.99%
	<i>Strongly disagree</i>	2.08%	1.86%	6.69%	8.68%	6.74%	4.46%
	<i>Disagree</i>	13.74%	14.27%	26.23%	26.42%	23.71%	24.11%
	<i>Agree</i>	59.67%	60.80%	44.72%	40.21%	42.89%	43.75%
Thanks to my resourcefulness, I know how to handle unforeseen situations	<i>Strongly agree</i>	24.50%	23.07%	22.36%	24.69%	26.66%	27.68%
	<i>Strongly disagree</i>	2.26%	2.15%	5.46%	7.04%	5.37%	4.34%
	<i>Disagree</i>	11.39%	11.83%	28.26%	21.79%	23.60%	25.38%
	<i>Agree</i>	60.49%	64.13%	44.28%	47.16%	44.57%	45.03%
I can solve most problems if I invest the necessary effort	<i>Strongly agree</i>	25.86%	21.90%	22.01%	24.01%	26.45%	25.26%
	<i>Strongly disagree</i>	1.45%	1.76%	2.90%	4.24%	2.00%	2.42%
	<i>Disagree</i>	6.87%	8.50%	15.40%	12.44%	9.91%	10.97%
	<i>Agree</i>	60.94%	60.90%	50.09%	48.70%	48.05%	49.11%
	<i>Strongly agree</i>	30.74%	28.84%	31.60%	34.62%	40.04%	37.50%

4.2.2 Subgroup analysis by age group

Figure 26 presents self-efficacy by age and country. The trends that we see across the age groups between the different countries vary slightly, although overall the scores are not significantly different from one another. Most strikingly, girls above the age of 14 in Kenya have a considerably lower self-efficacy score, although, since there are only 108 girls that fall into this category, this result may be due to the smaller sample size. In the other two countries, there is almost no difference in scores between the different age groups.

Figure 26: Self-efficacy by age group and country



Self-efficacy, confidence, and attitudes to school

Contextual barriers have the potential to influence a girl's self-efficacy, although a study of the responses from the girl module shows that there is little to no difference between girls facing various barriers and their counterparts, as shown in Table 26 below.

Table 26: Self-efficacy breakdown by girls' characteristics

	Nigeria	Kenya	Ghana
Single orphan	67.6	61.7	63.8
Living without both parents	68.9	60.9	65.9
Living in female-headed household	69.6	62.0	64.4
Difficult to afford for girl to go to school	67.7	60.8	64.9
Household does not own land for themselves	66.8	59.2	-

	Nigeria	Kenya	Ghana
Poverty rate (based on poverty line of \$1.90 / day)	65.3	59.6	61.3
LOI is different from the mother tongue	67.8	60.6	64.7
Girl does not speak the LOI	-	63.1	63.9
Head of household has no education	66.3	60.1	64.7
Primary caregiver has no education	65.5	60.1	64.7
Rural location ^a	65.6	-	-
only	66.8	60.9	63.4

Source: Living with one parent Baseline Girl Module 2018

Notes: Data is only reported for indicators that have ≥ 60 observations.

^a Rural or urban location was based on the school's location that the cohort girl attends. Data for Kenya and Ghana were not available and thus are not reported in the table.

Girls' self-efficacy and their capabilities and appearances at school

Having presented our findings from the quantitative survey, we now proceed to the concept of self-efficacy being discussed from both dimensions, i.e. a belief and an ability to make use of one's own beliefs to reach one's goals, based on the qualitative research.

According to our work with children through rich picture exercises and diaries, we can see that home and school are two key spaces where children both develop and express their self-efficacy. Both dimensions of self-efficacy are manifested and bounded by both of these settings, where children's views of their own capabilities and abilities to act on those views depend on their relationships with adults and other children. In particular, the effect of school-based clubs on girls' self-efficacy is more evident in Nigeria, where respondents feel that the girls' club has played a role in building the self-confidence of its members. We have found less evidence of this in Ghana or Kenya. In particular, only in one club in Kenya, girls say that they learned how to defend themselves from boys and achieve their education goals. In Ghana, girls were involved in quizzes and dramas and were happy performing in them although it is unclear what specific girls' needs these activities are targeting. One of the girls' club members interviewed in Nigeria said, *'Before now I was afraid of speaking among people, but after the exposure, I gained from the visit to represent my school, I can now talk comfortably and relate well with people'*. A SUBEB stakeholder who was interviewed reported that about 8,000 girls have participated in the club activities within the state since inception and this has helped to draw them away from being shy and self-confined to participate in active learning, while also improving their self-confidence and their sense of self-worth tremendously. There is a sense of pride associated with the club outcomes. The fact that club members take pride in their accomplishments reflects a certain level of self-confidence. Moreover, the primary 5 girls who were interviewed who were not part of the club repeatedly expressed their wish to become members of the club. When asked during the rich picture exercises why they desire to be club members girls stated that they too are keen to be taught new skills.

Across all the countries, children are aware of the importance of academic abilities for their success at school, which forms part of their self-efficacy. Both boys and girls in all the countries express that they feel happy to go to school and do well. Being able to complete tasks on their own in the class, to sit exams, being praised by teachers for good performance, being able to read well in class, and to attend

school create a sense of self-worth for the girls. Boys in Ghana also expressed similar thoughts that the girls were happy if they were able to answer questions asked of them in class or were able to perform well in tests and exams. In one of the rich picture exercises with boys, the respondents stated that it was important for a girl to attend school as this would prevent her husband from calling her an illiterate. The opposite of these positive academic outcomes are the factors that negatively affect the self-efficacy of children, which include bad performance in class or lacking any skills such as to read or write. These academic skills and abilities are highly valued by children and therefore affect their abilities to be able to achieve their academic goals.

The girls' module corroborates the findings from the qualitative study. Using a Likert scale to respond, girls were asked for their reactions to the statement 'I want to do well in school'. In all three countries, 98% of girls said they either agree or strongly agree with the statement. Similarly, in response to the statement 'I recognise when study choices can affect my life in the future', 92% of girls in Nigeria, 78% of girls in Kenya, and 86% of girls in Ghana agreed or strongly agreed with the statement. Over 95% of all girls want to continue studying past this year, and 92% of girls in Kenya and Ghana want to continue their education once completing secondary school. This is in contrast to the 5% of girls in Nigeria who aspire to complete primary 6 only and the 23% of girls who aspire to complete secondary school as a final step in their education, with only about two-thirds of Nigerian girls aspiring to continue their education after secondary school. In the follow-up question asking girls if they expect to reach that level of education, the vast majority said yes, although the higher the level of education they aspired to, the more likely they were to say no.

When asking the cohort girls about their attitudes to tests, 95% of girls in all countries either agreed or strongly agreed with the statement 'When I succeed at school it is because I worked hard'. This is seemingly at odds with the statement 'If I do well on a test it's because I am lucky'. In Nigeria, the same share of girls agreed or strongly agreed with this statement too, while in Ghana a third of girls did not agree and in Kenya half of all girls did not agree. It is possible that girls feel there is an element of luck involved in tests, but their responses undermine the possible conclusion that they feel their academic results are entirely in their control.

In addition to academic performance and skills comprising the children's efficacy, it seems that the way children look at the school setting, i.e. wearing a clean uniform and personal hygiene, in general, can make them feel confident. School uniforms have long been recognised as helping to reduce stigma for children living in poverty. In Ghana, it was mostly the boys who mentioned that lack of a clean uniform or personal hygiene as important. Through the rich picture exercise, it is evident that children's physical appearance influences the way they feel about themselves and their abilities as well as the way they relate to the people around them. Girls tend to draw a nice looking girl wearing a nice dress and shoes where 'good looking' is also associated with good performance. According to the self-efficacy theory, 'bad looking' would negatively affect girls' beliefs in themselves and their ability to achieve their academic goals.

In response to the statement 'I am proud that I have the correct uniform', 15% of girls in Ghana either disagreed or strongly disagreed. In Kenya, this was only 4% of girls, while in Nigeria 9% either disagreed or strongly disagreed. These results are echoed in the responses to the statements 'I am proud of my clothes' and 'I am proud of my shoes'. However, the results are more negative for the statement 'I feel my clothing is right for all occasions', with a quarter of girls in Ghana, 16% of girls in Kenya, and 10% of girls in Nigeria either disagreeing or strongly disagreeing.

Girls' self-efficacy in relationships with others

Similar to the school setting, at home children's self-efficacy, i.e. their views of their capabilities and abilities to act on those views is affected by the attitudes of and their relationships with others. In particular, recognition and praise from teachers and parents serve as a boost to children's self-esteem across all countries. The majority of parents interviewed stated that their children felt happy when they were able to assist with household chores, e.g. being able to wash their own clothes. Girls similarly expressed this in their diaries and in the rich picture exercises, noting that being able to complete household chores made them happy. Children write that they find immense happiness from sharing the families' responsibilities and the diary entries suggest that being able to help their parents and grandparents adds to their sense of well-being. Play is also a major part of children's daily life. Thus, in Nigeria, girls seem to feel proud/happy about being able to help parents at home as well as having a chance to play with their siblings. Parents in Kenya also mention that playing makes their children happy. Children play at school during their breaks and at home. When there are chores at home in the evening on weekdays and on weekends, children come home, finish their chores, eat, and then play, complete their homework, or read. They mention that they enjoy all of these activities. Parents mention balancing out their work so they have time to rest, but in one diary a child mentions feeling tired because of their chores. In Ghana, teachers and community members suggest that sometimes the boys are the ones who loiter around and do not go to school because they were playing around. In no countries did children complain about the chores they need to do daily, although girls are suggested to do more household chores than boys in Ghana and Kenya.

Girls are agents of their own lives and are active members of society they live in and about which they are highly aware. Their relationships with the opposite sex seem to be important to the way girls feel about themselves at home and school. When the girls in Ghana were asked about negotiating with those around them, most of them mentioned that they felt that if someone was wronging them or lying about them, they would be able to push back. Girls in Ghana and Kenya show a clear sense of self-awareness and awareness of issues affecting them in their surroundings that they need to deal with (e.g. dealing with members of the opposite sex). During the rich picture exercise, girls described the imagined girl, Miriam, and her perception of boys in this way:

- 'She can't be deceived by a man.'
- 'She will refuse to listen to boys. She will warn them. She will not tolerate nonsense from them... Because, when guys call her, she tells them she does not want their stories and she reports to her parents.'
- 'She will tell that guy that she does not want to have sex.'
- Miriam doesn't like 'Being lied to by boys'.

At the club, Miriam learns how to defend herself against boys and to achieve her educational goals. Clausius learns at club how to read and understand more about girls, how to dress, and abstain from sex. According to the boys in the boys club,¹²⁶ their imagined girl, Clausius, relates to boys and men in the way that:

¹²⁶ Boys who participated in the rich picture exercises are members of boys' clubs. They were asked to draw an imaginary girl of their age to discuss their views of girls' experience of schooling, their ability to study, and boys' attitudes toward girls' education.

- ‘Her eyes look like she is looking someone.’
- ‘It looks like the boys can come for him [*sic*], like that.’
- ‘Because she can go and the boys can call him because of the clothing that she wears.’
- ‘The boys can abuse her.’

Both pictures demonstrate that girls are well aware of the opposite sex and are aware of the risks associated with having relationships with boys. According to the self-efficacy concept, girls with a strong feeling of self-efficacy are better at identifying challenges related to the opposite sex and are better able to deal with them and be in control. Girls’ clubs, particularly in Nigeria, seem to promote girls’ self-efficacy by raising their confidence and self-worth while in Kenya and Ghana, according to the drawings above, they are focused at equipping girls with necessary knowledge and skills. Overall, while the clubs focus on different topics and activities, some useful knowledge, skills, and attitudes are being developed across all of them.

Summary

This section discussed the self-efficacy of boys and girls based on baseline data collected in Ghana, Kenya and Nigeria. We found that the self-efficacy of girls is manifested and affected in both the school and home domains – both of these spaces are important for children, where they seek to succeed as school children as well as daughters and sons. Girls’ clubs are suggested as an effective mechanism to increase their awareness and equip them with the knowledge and skills to perform well at school and outside school when dealing with the opposite sex. Indeed, girls’ clubs are just one element of a multi-pronged strategy to empower girls among other elements, which included a DP-1 push for gender-responsive schools and classrooms (reinforced in DP-2 trainings) and school and community engagement and mobilisation in support of quality education for boys and girls alike. Both of these should be contributing to an environment that is more conducive to enabling girls to become more self-assured and assertive in the classroom and beyond.

However, girls’ self-efficacy as both their own judgements and ability to act is constrained by other factors that are largely not under the control of children. In particular, some children cannot regularly attend school, even if they want to, due to the barriers to attendance further discussed in Chapter 5. They also struggle to find time to revise and do their homework due to their share of domestic responsibilities, when especially girls are busy with household chores and caring.

4.3 Transition outcome

Transition as an outcome for DP-2 looks at whether cohort girls remain in school and progress within upper primary school in Kenya and in the case of Ghana and Nigeria whether girls are successfully transitioning to JSS. Also, for those cohort girls that are unable to continue their formal education, transitioning to other vocational or employment training or other non-academic pursuits is considered by DP-2 to represent successful transition. **Given the joint sample approach taken by this evaluation, all the cohort girls across the three countries are enrolled in school; therefore, the transition rate at baseline is 100%.** The table below shows what cohort girls were doing in the year prior to the baseline.

Cohort sample transition pathway (TREATMENT GROUP)												Baseline Transition rates
Pre-baseline - 2017						Baseline - 2018						
In-school progression (promotion)	In-school progression (repetition)	Moves into secondary school	Vocational training	Employment	Dropped out of school	In-school	In secondary school	In non-formal school	Vocational training	Employment	Dropped out of school	Successful transition rate (%)
Nigeria												
86%	11%	0%	0.5%	0%	3%	100%	0%	0%	0%	0%	0%	100%
Ghana												
84%	13%	0%	0%	0%	3%	100%	0%	0%	0%	0%	0%	100%
Kenya												
87%	13%	0%	0%	0%	0.3%	100%	0%	0%	0%	0%	0%	100%

Cohort sample transition pathway (CONTROL GROUP)												Baseline Transition rates
Pre-baseline - 2017						Baseline - 2018						
In-school progression (promotion)	In-school progression (repetition)	Moves into secondary school	Vocational training	Employment	Dropped out of school	In-school	In secondary school	In non-formal school	Vocational training	Employment	Dropped out of school	Successful transition rate (%)
Nigeria												
86%	12%	0%	0.3%	0%	1%	100%	0%	0%	0%	0%	0%	100%
Ghana												
85%	14%	0%	0%	0%	1%	100%	0%	0%	0%	0%	0%	100%
Kenya												
88%	12%	0%	0.1%	0%	0.0%	100%	0%	0%	0%	0%	0%	100%

When considering transition in this evaluation it is important to note that GEC-T uses an idiosyncratic definition of transition (see Box 6), which incorporates, among other aspects, both progression between primary grades as well as transitioning between primary and JSS. The set of barriers that prevent a child progressing from one primary grade to another can be different to the set of barriers that prevent a child transitioning from primary school to JSS. Therefore, we analyse these separately – although we do maintain the GEC-T definition and refer to both *progression* and *transition* as *transition*.

Box 6: The project's definition of transition

Transition in the education sector commonly refers to students transitioning from one level of education (e.g. primary) to another higher level (e.g. secondary). However, according to the GEC-T definition transition takes a broader and slightly different definition to what is considered the norm. According to the GEC-T, transition as an outcome includes progression or promotion within primary school, transition from primary to secondary (in the case of DP-2, to JSS), and transition to other non-formal education, vocational, or employment training or opportunities. It is important to be clear on the distinction between progression/promotion within primary and transition from primary to secondary as the barriers and challenges for children are different. While there is certainly overlap in these barriers as they relate to, for example, poverty or attitudes to education, transition from primary to secondary has its own unique set of challenges. A simple example of this is the availability of secondary schools relative to primary schools.

In our review of the literature on transition, we find very few studies that look at the transition from primary to secondary school in developing countries (or in rural areas). Nevertheless, the existing literature suggests that the transition from primary to secondary school is usually considered one of the most difficult processes in children's educational careers and can affect both their academic performance and their general sense of well-being.¹²⁷ According to Vogler *et al.* (2008:1),¹²⁸ transition is a key event and/or process 'occurring at specific periods or turning points during the life course'. It implies a change of status and a new set of characteristics and responsibilities. In the case of DP-2, the transition from primary to secondary school can imply a physical transfer from one school to another accompanied with physical and physiological changes due to the beginning of puberty and adolescence and increasing expectations of contributing materially toward their household's material well-being. In fact, across the three countries we may find not one but several ways to experience the transition to secondary school or even transition within primary school, i.e. to upper primary, where one child may find a secondary school close to his or her home but another may need to migrate to a new location, move to another household, or have to walk/travel a long distance to reach it. In addition, experiences of transitions are affected by different factors and circumstances, such as gender, sibling order, household composition, parental background, poverty, location, etc.

When assessing barriers to transition for girls within primary school, the strongest barrier is the direct cost of attending school, especially for girls living in poor households.¹²⁹ Dropout is a serious problem in low-

¹²⁷ Zeedyk, S., Gallacher, J., Henderson, M., Hope, G., Husband, B. and Lindsay, K. (2003) 'Negotiating the Transition from Primary to Secondary School', *School Psychology International* 24.1: 67–79.

¹²⁸ Vogler, P., Crivello, G. and Woodhead, M. (2008) 'Early Childhood Transitions Research: A Review of concepts, theory, and practice', *Working Paper 48*. Bernard van Leer Foundation / Young Lives, The Hague.

¹²⁹ World Bank (2018) *World Development Report 2018*. Accessed on 08 August 2018 from www.worldbank.org/en/publication/wdr2018

income countries, especially among late entrants and poor children.¹³⁰ Because of poverty, girls sometimes have to undertake paid work outside of school that further increases their risk of dropping out before completion.¹³¹ Transition through the primary school grades is suggested to be age-specific, meaning that children of certain ages and certain other characteristics are more likely to drop out than their counterparts. For example, children who work and attend school lag behind their non-working peers, in terms of grade progression (transition age to JSS is 13 in almost all countries), and this is likely due to children repeating grades arising from poorer performance, higher incidence of late entry, and higher absenteeism.¹³² Progression is also unequal for rich and poor children. The effect of economic inequality between the poorest and richest children in progression through the primary school varies across the world where, for example, in Kenya inequality is evident throughout the cycle from access through to completion, while in Nigeria most children from rich households start school and only 30 out of 100 of those from the poorest households start school.¹³³ However, once in school, they are likely to remain so until the end of primary school.¹³⁴

Parental support also decreases with poverty as parents lack not only the economic but also the emotional support to encourage children through primary school. Poor teaching quality and school infrastructure also reduce the likelihood of girls completing primary school. Furthermore, when there is a language barrier in the classroom and students do not fully understand the content and lack basic literacy, the concomitant rise in frustration increases the risk of dropping out instead of moving onto further primary levels. The lack of separate toilets for boys and girls also encourages girls to drop out, especially at upper primary levels. Teenage pregnancy becomes an issue in the upper levels of primary school and forces girls to drop out of school just before completion. Other barriers to transition within primary school include abuse at home and at school, repeating grades, and residing in conflict-affected areas. The likelihood of dropping out before the completion of primary school is also higher when there is greater congestion within schools due to higher enrolment, lack of teachers, and inadequate school infrastructure. This problem is further exacerbated by the declining teaching quality associated with congestion.¹³⁵

When girls complete primary school and transition to secondary school, the barriers they face in successfully transitioning to secondary become more economic in nature as opposed to the barriers that they faced in completing primary school. When girls transition to secondary school, the direct costs associated with schooling increase compared to primary school and serve as a hindrance for poor families. These costs are associated with transportation, school fees, and books,¹³⁶ which while present at primary school increase as a child transitions to secondary school. Since secondary schools are

¹³⁰ UNESCO (2012) *EFA Global Monitoring Report 2012: Youth and Skills – Putting Education to Work*. Paris, UNESCO.

¹³¹ UNICEF Ghana (2012) *Global OOSC Report 2012*. Accessed on 08 August 2018 from <http://allinschool.org/wp-content/uploads/2014/08/Ghana-OOSCI-Country-Report.pdf>

¹³² Understanding Children's Work (2015) 'Evolution of the Relationship Between Child Labour and Education Since 2000'. Background paper for *EFA Global Monitoring Report 2015*.

¹³³ UNESCO (2012).

¹³⁴ Ibid.

¹³⁵ UNESCO (2008) *Education for All Global Monitoring Report 2008*. Accessed on 09 August 2018 from <http://unesdoc.unesco.org/images/0015/001555/155589e.pdf>

¹³⁶ Global Partnership for Education (2013) 'Accelerating Transition of Girls to Secondary Education: A Call for Action'. Available at www.ungei.org/resources/files/Accelerating_Girls_Transition_GPE_5_Mar_2013.pdf

usually at larger distances than primary schools, the opportunity cost associated with travelling to and from the school increases relative to primary school, particularly if there are security concerns or in cultural contexts limiting the ability of girls to travel alone to school. Moreover, when there are a greater number of children in the household under the age of seven, the pressures on girls to stay at home to care for other dependents in the household increases, reducing the probability of reaching post-primary education.¹³⁷

In this section, we discuss the qualitative and quantitative findings on transition from the baseline fieldwork and describe the general baseline trends and findings across the three countries. Table 27 presents the transition pathways, i.e. defining what is considered as successful and unsuccessful transition under DP-2. The challenges or barriers to transition at each of these transition points range from inadequate community and family support and lack of motivation to financial hardship, distance to school, and family responsibilities (i.e. household chores, hawking, etc.).

Table 27: Transition pathways

	Baseline point	Transition points	Successful transition	Unsuccessful transition	Challenges to transition
Ghana / Nigeria	Primary 5	Primary 5 to 6	Student promoted to next grade level, student not promoted but remains in school	Student drops out of school due to pregnancy, household employment, marriage, or other	Students at this level may have insufficient community and familial support, feel left behind and wrestle with low self-esteem and motivation to learn, and/or simply have insufficient grades for promotion.
		Primary 6 to JSS-1	Student successfully completes primary, passes exams and enrolls in JSS; Student not promoted but remains in school; Student completes primary but opts for alternative education (i.e. trade or speciality school) and/or employment training	Student drops out of education entirely due to marriage, pregnancy, lack of economic support, etc. Student is employed in a non-professional role (e.g. keeping the family shop, working in agriculture, etc.)	Students transitioning from primary to JSS may encounter less family support. Additionally, school and uniform fees at this level may prove a financial burden. Many JSS are further than primary schools, presenting logistical challenges.
Kenya	Primary 5	Primary 5 to 6	Student promoted to next grade level, student not promoted but remains in school	Student drops out of school due to pregnancy, household employment, marriage, etc.	Students at this level may have insufficient community and familial support, feel left behind and wrestle with low self-esteem and motivation to learn, or simply have insufficient grades for promotion. Students in Wajir are particularly susceptible to
		Primary 6 to 7	Student promoted to next grade level, student not promoted but remains in school	Student drops out of school due to pregnancy, household employment, marriage, etc.	

¹³⁷ Rolleston, C., Akyeampong, K., Ghartey, A.J. and Lewin, K. (2010) 'Educational Access in Ghana: Country Research Summary'. CREATE (Consortium for Research on Educational Access, Transitions and Equity), University of Sussex, UK.

Baseline point	Transition points	Successful transition	Unsuccessful transition	Challenges to transition
				family relocations during the school year.

Source: DP MEL Framework 2017

Some of the barriers in Table 27 identified by the project are also reflected in our qualitative baseline findings, which are discussed below.

Nigeria

In Nigeria, barriers to transition are associated with the proximity of a secondary school in relation to the location of the primary school, according to parents. When a secondary school is in close proximity, this increases the likelihood of a successful transition. The literature suggests that transport is especially an issue for older girls.¹³⁸ A lack of money was also a barrier commonly identified by parents during interviews. In this regard, parents, as well as individuals involved in CAP activities, suggest that financial constraints make it challenging for families to ensure that their children attend school until secondary school. The cost of education has been identified as constituting a major proportion of the income of most households in Nigeria, especially of the poor. The poverty status of the household is suggested to matter especially in regard to whether girls complete primary school and transition to junior and senior high school.¹³⁹ Furthermore, transitioning is hampered by the cultural practice of girls being married off by their parents after completing primary school. While these pressures exist during primary school, transition to secondary school represents a key point as parents make considerations about investing in a new cycle of education. Late marriages are risky in the eyes of parents because older girls may not have a suitor if they delay marriage in preference for school or this may cause disharmony in her household if she is overexposed to modern education. Boys also face certain transition-related challenges, with the most important appearing to be the decision to relocate to large cities (Abuja or Lagos) for employment opportunities.

Kenya

In Kenya, the biggest reason why girls do not complete primary school or transition to higher levels of education is early pregnancy and marriage, according to parents and communities in Wajir and Kajiado, although these are not reported as a major barrier. Schools and community leaders report that these cases have been declining over time, but they still exist. They attribute this decline to several reasons, such as support and counselling from the school, the involvement of community leaders in counselling parents, and support from the government for the education of girls. Another barrier to attendance in Kenya is the lack of sufficient resources to buy the necessary supplies when girls are menstruating. Schools have started stocking up on pads and underwear, with monetary support from parents, donors, and the government to curb absenteeism, which affects performance negatively and eventually leads to

¹³⁸ Unterhalter *et al.* (2014).

¹³⁹ Nguyen and Wodon (2014), cited in Seshie-Nasser, H. and Oduro, A. D. (2016) 'Delayed primary school enrolment among boys and girls in Ghana'. *International Journal of Educational Development*, Volume 49, pp. 107–114.

dropouts. With regards to this challenge, girls' club mentors suggest that discussing challenges faced during menstruation in girls' clubs helps girls stay in school.

Ghana

Parents we interviewed in Ghana did not want their daughters to become 'wayward' and end up similar to themselves, and thus a proper education was seen as important in preventing such an outcome from happening. However, this enthusiasm was often caveated by lack of financial resources for their daughters to be able to continue their education, to procure school supplies, and pay fees. According to some teachers and community members, it was common to see girls dropping out to earn money from trade (to carry loads in cities) and support their parents financially. During the rich picture exercise, children suggested that they would start selling things and working to support their parents by doing paid work. Girls who are particularly vulnerable during transition and likely to drop out are those who were already old for their class group to start with, girls struggling academically to advance to higher classes, girls who have large number of siblings, and girls from single-parent households. Another factor acting as a barrier to transition was around teenage pregnancy, similar to Kenya, but again reported in only a few cases. Some communities expressed views about girls either chasing men or being deceived by men leading to teenage pregnancy, and suggested that early marriage is likely to prevent such situations since girls would be married and any pregnancy would thus be legitimate. However, we cannot be sure whether or not these marriages are 'early marriages' since, according to our qualitative findings, girls in Ghana tend to start school later than expected.

These structural and economic reasons are widely accepted and in line with the literature. In particular, long journeys to the secondary education site¹⁴⁰, poverty and the involvement of children in paid work¹⁴¹, and issues of isolation, lack of resources, and mismanagement of secondary schools all negatively affect overall educational quality in rural areas¹⁴² and are among those factors affecting children's poor transition to secondary school. However, economic challenges stand out as the one of the key barrier to transition. It is argued that the opportunity cost of enrolling girls (which can also be applied to transition) are higher than those for boys (given that females, as indicated earlier, spend more time on household tasks) and the perceived economic returns to parents of sending their daughters to school tend to be lower than those for their sons. This suggests that in patrilineal descent systems girls are incorporated into a wife's husband's family, while boys stay with that of their parents.¹⁴³

¹⁴⁰ Cueto, S., G. Guerrero, C. Sugimaru, A.M. Zevallos. 2009. Sense of belonging and transition to high schools in Peru. *International Journal of Educational Development* 2009: 1- 11

¹⁴¹ Alcazar, Lorena (2008) 'Asistencia y deserción en escuelas secundarias rurales del Perú' in Martín Benavides (ed.) *Análisis de programas, procesos y resultados educativos en el Perú: contribuciones empíricas para el debate*, Lima: GRADE; Rodríguez, José (2002) *Adquisición básica de educación escolar básica en el Perú: Uso del tiempo de los menores de en edad escolar*, Working Paper no 16, Lima: UMC

¹⁴² Benavides, Martín (2006) 'Las escuelas, las familias y el Género' in Patricia Ames (ed.) *Las brechas invisibles. Desafíos para una equidad de género en educación*, Lima: IEP Benavides, Martín (2007) 'Lejos (aún) de la equidad: la persistencia de las desigualdades educativas en el Perú' in Grupo de Análisis para el Desarrollo (ed.) *Investigación, políticas y desarrollo en el Perú*, Lima: GRADE

¹⁴³ Stephens, D. (2000) 'Girls and Basic Education in Ghana: A cultural enquiry'. *International Journal of Educational Development*, Volume 20, pp. 29-47.

4.3.1 Benchmarking

As was outlined in Box 4, a separate transition benchmarking household survey was conducted in select treatment communities to measure the current rates of transition among girls aged 11 to 15 in the project target areas. The transition rates from this benchmarking sample will serve to calculate the target for the project. In Figure 28, we present the overall transition rate by age and country. Below we discuss the overall transition rate for the benchmark group by country and age, and also draw on transition data from secondary sources to make a comparison. It is important to note that the indicator for transition for this evaluation is differently constructed relative to how it is reported by other sources (e.g. MoEs, UN, World Bank, etc.). Data from secondary sources consider transition as children staying enrolled in formal education, and does not include any of the follow aspects as pathways to transition (i.e. vocational, non-formal education and employment opportunities) in their calculations. Figure 28 illustrates the overall transition rate for the benchmark sample by age and country. The transition rate for each age is calculated by taking the total number of children in the benchmark sample who have successfully transitioned (i.e. girls who are currently enrolled in primary school, or transitioned to secondary school or if in primary 6 or secondary school prior to the baseline and is now attending non-formal education or some vocational training) divided by the total number of girls for the particular age. Similarly, the overall transition takes the total number of girls who have successfully transitioned as per the definition above, divided by the total number of girls. Annex 20 provides the full detailed analysis on this.

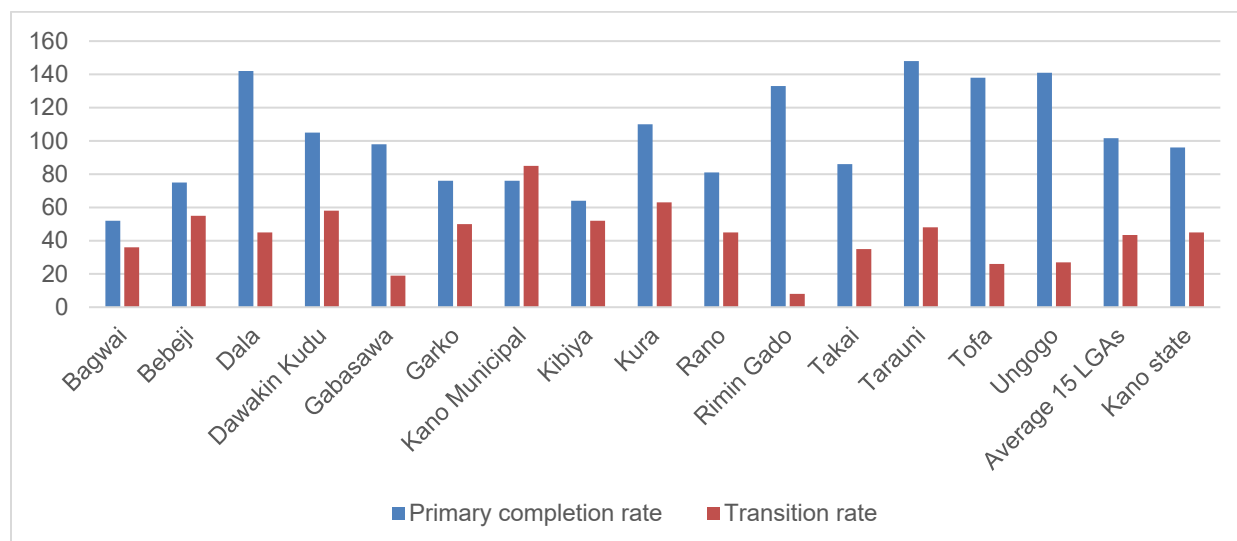
In Nigeria, the overall transition rate (i.e. successful transition) as defined by the project is 86% for the benchmark group (see Figure 28). Unsuccessful transition is seen at all ages, but is higher between the ages of 12 and 13 – usually the point at which children progress into upper primary and transition to JSS. There is also a further dip observed when girls are 15 years of age. According to the 2016/17 ASCR for Kano State, female transition rates from primary to JSS were 45% on average for the state and 43.5% for the 15 LGAs covered by DP-2. According to EMIS 2016 data,¹⁴⁴ primary completion rates for the same year were 96% for females for the entire state and 102% for the 15 LGAs (see Figure 27). Although the transition rate definition for this evaluation takes into account girls in non-formal education, vocational training, and other employment activities, the benchmark rate seems very high relative to the transition rate reported by ASCR 2016/17.

Given this finding, and the peculiarities of the GEC-T definition of transition (noted in Box 6 above), it is useful to further decompose the transition benchmark figure by transition pathway (see Annex 20). This demonstrates that, while 86% of the benchmark sample were successfully transitioning, just 29% of girls overall had made the transition from primary to JSS and just 32% of girls aged 12–15 years had made this transition.¹⁴⁵ As such, Figure 27 also demonstrates the high primary completion rates reported by

¹⁴⁵ We report this average given that the expected age for this transition begins at 12–13 years in Nigeria.

ASCR for Kano State, more closely related to the primary in-school progression rates that the benchmarking sample is likely being influenced by.

Figure 27: Female primary completion¹⁴⁶ and transition rate¹⁴⁷ by 15 LGAs and Kano State



Source: ASCR 2016/17 Report

In Ghana, the overall transition rate was at 96% and the rates remained above 90% for all age groups (see Figure 28). The transition rates saw a slight drop as girls get older, i.e. at between the ages of 12 and 14 years. According to the 2015 Education Sector Performance Report (ESPR),¹⁴⁸ the transition rate (primary to JSS-1) increased from 92.7% in 2012/13 to 99.1% in 2014/15 nationally for Ghana. The rates were reported to be lower in deprived districts¹⁴⁹ relative to the national average at 91.7% in 2014/15 from 86.8% in 2012/13. Data on the female transition rate was not available in this report, but according to the UIS the female transition rate¹⁵⁰ from primary to secondary was 93% in 2016.¹⁵¹ The primary completion rate was 99.6% according to the 2015 ESPR. We were not able to obtain transition data specific to the

¹⁴⁶ Primary completion rate, or gross intake ratio to the last grade of primary education, is the number of new entrants (enrolments minus repeaters) in the last grade of primary education, regardless of age, divided by the population at the entrance age for the last grade of primary education.

¹⁴⁷ Transition from primary 6 to JSS-1. Details on how this was calculated were not provided in the source report. However, normally the transition rate is calculated by taking the number of pupils admitted to the first grade of higher level of education in a given year, expressed as a percentage of the number of pupils enrolled in the final grade of the lower level of education in the previous year.

¹⁴⁸ See [https://new-ndpc-static.s3.amazonaws.com/CACHES/PUBLICATIONS/2016/03/22/Education+Sector+Performance+Report+\(ESPR\)+2015_Final.pdf](https://new-ndpc-static.s3.amazonaws.com/CACHES/PUBLICATIONS/2016/03/22/Education+Sector+Performance+Report+(ESPR)+2015_Final.pdf)

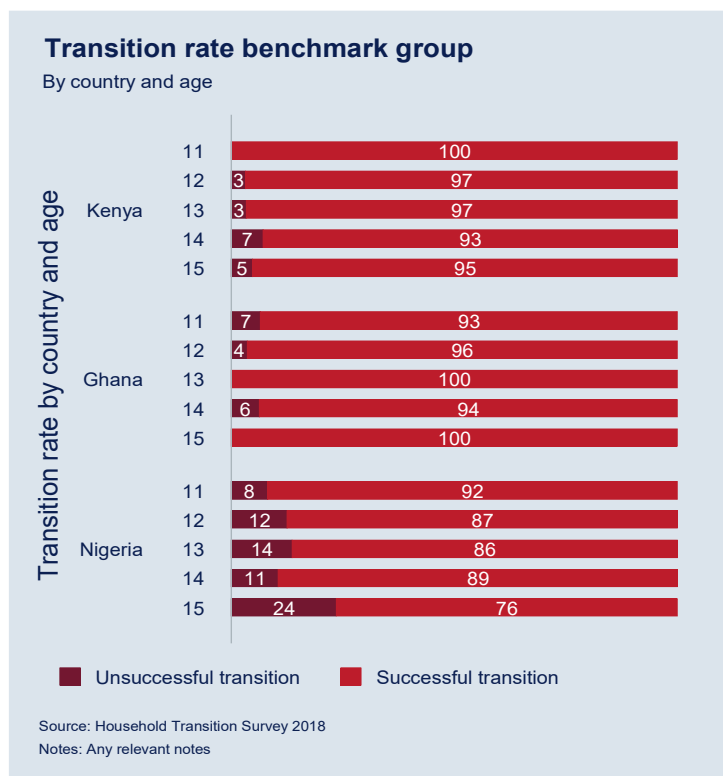
¹⁴⁹ The MoE carried out an exercise in 2011/12 to categorise the districts based on education and poverty criteria. After ranking all the districts with this deprivation index, the bottom third were categorised as 'deprived'. The deprived districts as part of this report included 75 (out of 216 total). This measure is now updated on an annual basis by UNICEF in collaboration with the Ministry of Local Government and Rural Development. At the time of the most recent report (2017), just over half of DP-2 districts were classified as 'deprived', including Tamale Metro, East Gonja, West Mamprusi, Karaga, and Sagnarigu.

¹⁵⁰ Measured by taking the number of pupils (or students) admitted to the first grade of a secondary education in a given year, expressed as a percentage of the number of pupils (or students) enrolled in the final grade of the primary education.

¹⁵¹ See <http://uis.unesco.org/country/GH>

Northern region for Ghana, although given the high proportion of districts in northern Ghana that represent ‘deprived’ districts this is likely to be lower than the average. The overall transition rate for the benchmark group seems to align with the figures reported in the 2015 ESPR for transition both nationally and for the deprived districts.

Figure 28: Overall transition rate by country and age



Similar to Ghana, the transition rate in Kenya is 96% and well above 90% for all age groups (see Figure 28). The focus point for transition in Kenya for this evaluation is different to that of the two countries, such that in Kenya girls that make up our sample will be transitioning within primary school, i.e. primary 5 to 6 from base to midline and from primary 6 to 7 from mid to endline. Therefore, the secondary data on transition looks at specifically retention or promotion within primary grade levels. According to the MoST Basic Education Statistical Booklet Report 2014, student retention in primary levels 1 to 6 was 98%. However, this drops in the last two years of primary school, with the retention level from primary 6 to 8 reported as 77.7%. Data from this report also states that the highest dropout rates were reported in primary 7 at 13.6% and primary 8 at 23.1%. These rates were higher for girls at 14% and 23.5% for primary 7 and 8, respectively. The report also notes that there are declines in the promotion rates for both boys and girls in these two last grades (78.7% for primary 7 and 75% for primary 8) relative to the first six years of primary school (where levels remain above 90%). The primary completion rate in Kenya has also seen a drop from 86.5% in 2009 to 79.3% in 2014, but according to 2016 data from the World Bank the

primary completion rate¹⁵² in Kenya is at 102% for female students. We were not able to obtain transition data specific to the five relevant counties in Kenya.

Although the transition rate for the benchmark group is higher for Nigeria relative to the secondary data, according to Humphreys (2015)¹⁵³ there has been a consistent fall in the dropout rates of children from primary 6, meaning that more children are making the transition from primary school to JSS. The report suggests that the reasons for this are the steady increase in government provision of JSS, from around 8,200 schools in 2005/06 to almost 12,700 in 2008/09 and therefore pupils re-joining the government sector after attending private primary schools. Furthermore, it is claimed that a shortage of accessible JSSs was a major obstacle to completing basic education in a number of states.¹⁵⁴ In general, there are far fewer secondary schools available across Nigeria with large differences between rural and urban locations. More children in rural areas and in the north have to walk long distances to a secondary school. In Nigeria, an improved level of girls' transition is explained by girl-specific interventions by SBMCs – such as separate toilets for girls and boys, provision of sanitary wares, and scholarships for transitions to JSS.¹⁵⁵

Parents and communities engaged in the qualitative fieldwork in Nigeria also share the same view that transition rates have increased in their respective schools while one teacher suggested that such positive results were particularly seen among the girls. This was explained by the shift in mindset with more value now being placed on education compared to previous times. Community leaders and SUBEB officials also share this perspective, noting that there has been a shift in mindset, particularly in public schools. These mindset changes were attributed to the presence of more educated people, i.e. mentors and role models in the community. Their presence is perceived to foster motivation among children to aspire to more in life. Previously, parents would enrol their children (girls) to complete schooling until primary 6 and then marry them off. This is reported to have reduced. A religious leader stated that community attitudes toward transition have changed, also noting that in the past it was difficult to find a girl with higher education in a family in the community. Nine parents also expressed their desire for their children to complete secondary school and transition to a higher level similar to their older siblings. However, 22 of the parents wanted their children to continue only to secondary school and, of these, two noted that community members frown at parents who allow their daughters to continue beyond secondary school before marriage.

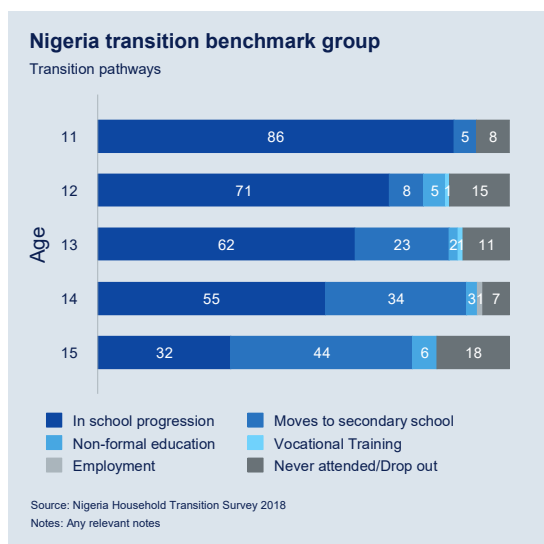
¹⁵² Primary completion rate, or gross intake ratio to the last grade of primary education, is the number of new entrants (enrolments minus repeaters) in the last grade of primary education, regardless of age, divided by the population at the entrance age for the last grade of primary education. Data limitations preclude adjusting for students who drop out during the final year of primary education.

¹⁵³ Humphreys, S. with Crawford, L. (2015) 'Issues of educational access, quality, equity and impact in Nigeria: The EDOREN review of the literature on basic education'. EDOREN.

¹⁵⁴ UBEC (2012a), cited in Ibid.

¹⁵⁵ Adediran (2010), cited in Ibid.

Figure 29: Nigeria transition benchmark group



Taking a look at the specific transitions pathways as defined by the project in Table 27, we find that the majority of girls were enrolled in school¹⁵⁶ prior to the baseline (i.e. 2017) across the three countries – 89% in Nigeria (see Figure 29) and 97% in Kenya and Ghana (see Figure 30 and Figure 31, respectively). We find that these trends remain the same in Ghana (97%) and Kenya (96%) at baseline (i.e. 2018), but declined to 80% for Nigeria. In Nigeria, the girls that were no longer enrolled in formal education at baseline were reported to have left school to pursue non-formal education, specifically religious studies, attending vocational training (e.g. beading, knitting, and tailoring), and non-formal employment. In Ghana and Kenya, the shift to non-formal education and employment from 2017 to 2018 was observed for only a few of the girls.

Figure 30: Kenya transition benchmark group

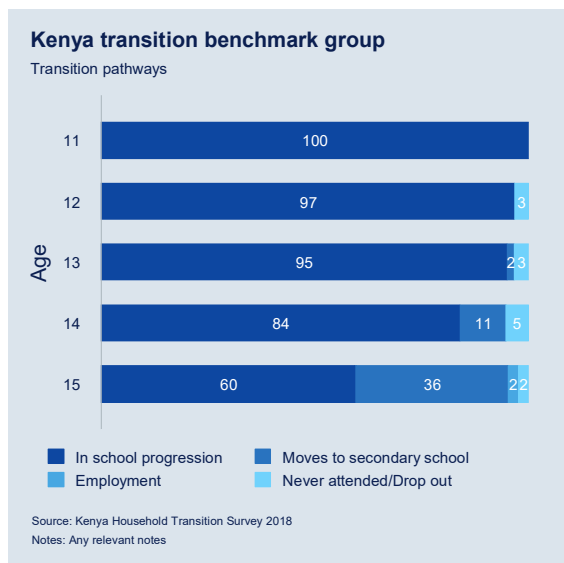
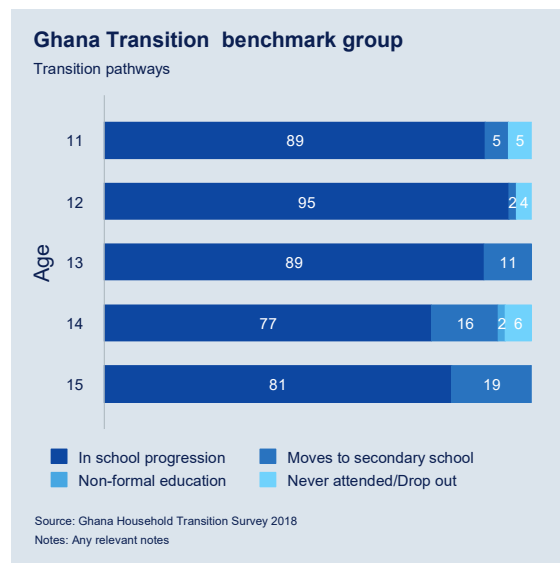


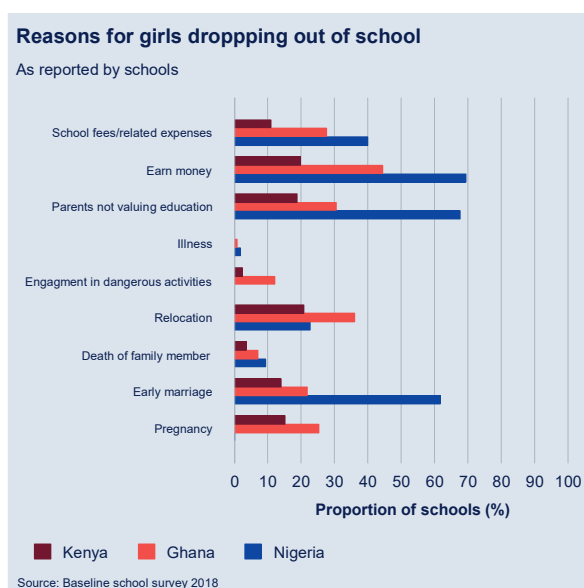
Figure 31: Ghana transition benchmark group



¹⁵⁶ Considering figures for girls' in-school progression (i.e. within primary school) and those that are in or moved to secondary school).

The proportion of girls reported to have either dropped out of school or never attended it was relatively small and remained the same across both years in Ghana and Kenya (3%). However, in Nigeria the proportion was higher relative to the other two countries at 11% in 2017 and increased to 12% in 2018. Across both treatment and control schools, head teachers were asked what the main reasons were for girls dropping out of school. As shown in Figure 32, across the three countries schools reported that the main reasons girls drop out of school in their community were the need for children to support their family by earning money, ability to afford school, the value placed on education by parents, and early marriage. In Kenya and Ghana, pregnancy was noted as one of the possible reasons in some communities but was not mentioned in Nigeria.

Figure 32: Reasons for girls dropping out



In our report, the age of children stands out. Looking at transition by age, in both Ghana and Kenya girls generally seem to transition successfully into formal education (i.e. in-school progression and move to secondary school), with roughly just 3–7% of girls dropping out starting when they are aged 11 through to 15. The Nigeria data paints a slightly different picture from the other countries, such that although about 80% of girls remain enrolled in formal education or other activities such as vocational or non-formal education and/or employment, the proportion of girls who have dropped out or never enrolled are higher during the ages of 12, 13, and 15 relative to the other ages. Possible reasons for the spike in dropout rates at the age of 12 and 13 might be due to it being the transition age from primary 6 to JSS-1.

Dropout rates can also be high when girls enrol in primary school later than the official entry age, especially as they approach adolescence¹⁵⁷. Delayed entry into primary school can make the attainment of the goal of universal primary education difficult for two reasons¹⁵⁸. First, not all children at the official entry age for primary school will be enrolled in school and, second, delayed entry can increase the likelihood of non-completion of primary education (ibid.). The average age of the cohort girl is about 11

¹⁵⁷ Rose, P. and Al Samarrai, S. (2001) Household Constraints on Schooling by Gender: Empirical Evidence from Ethiopia. *Comparative Education Review*, 45(1): 36- 63; Wils, A. (2004) Late entrants leave school earlier: evidence from Mozambique. *International Review of Education* 50(4): 17-37

¹⁵⁸ Seshie-Nasser, H. & Oduro, A. D., 2016. Delayed primary school enrolment among boys and girls in Ghana. *International Journal of Educational Development*, Volume 49, pp. 107-114

years in Kenya and Nigeria and 12 years in Ghana, where the normal or expected age for primary 5 students is 10 years. In our qualitative baseline, we found that many of the girls in primary 5 across the countries were actually much older than the official age. For example, in Ghana, many of them were actually 12–14.

Some authors have argued that school transition consists of two dimensions – social and systems-related – which are argued to be two separate domains that should be addressed on their own. This suggests that children’s experience of the transition to secondary school should be seen as navigations through both the formal (school) and informal (peer) social systems (West *et al.* 2010: 44).¹⁵⁹ Although our study does not research the social dimensions of transition and progressions through the primary school, we assume that this could have some bearing on our findings and the context whereby children in primary education seem to be older than normal age and therefore might face more challenges in terms of their social identity at the secondary school and might, therefore, drop out. Indeed, this fact is also ‘conductive’ to early marriage and intersects with other markers of marginalisation such as poverty.

Support with children’s learning outcomes and transition

The literature suggests that remedial classes have promising potential for improving learning outcomes¹⁶⁰ if they are adaptive to the student’s learning level.¹⁶¹ However, their effect on transition to secondary school and progression through primary school is unknown. We found that some schools in all three countries take initiatives to improve children’s learning outcomes to encourage them to stay at school longer and transition to higher grades. However, we are unaware of the extent to which these classes are adapted to the particular children and their needs. In Nigeria, one of the MoE/SUBEB officials we interviewed revealed that the SUBEB is partnering with DP-2 to undertake extra coaching classes to help prepare children to pass the common entrance examination that allows them to transition into secondary school. None of the schools visited, however, mentioned an explicit working partnership with the relevant SUBEB in this regard, but they did refer to how each works separately and how there are occasions when they support each other. In the three public schools, teachers noted that there are efforts by the school to provide extra classes for pupils when teachers volunteer their time to achieve this, which would certainly be supported by the Accelerated Learning Strategy developed for DP-2 in mid-2018. These classes are targeted at underperforming students and to prepare those in primary 5 and 6 for the JSS entrance examination.

In an effort to improve transition rates in Nigeria, one of the public schools stated that through the support of the CAP and community it has been successful in establishing a JSS within the premises of the primary school. About 20 female students who graduated from the primary school have successfully transitioned into the secondary school. This initiative was also in response to concerns within the community that the nearest secondary school for girls was located a great distance away, thus making safety a challenge.

Similarly, some schools in Kenya organise extra curriculum classes for students to ensure children do well, and this now forms a central part of DP-2’s development of the Accelerated Learning Strategy. Teachers believe that DP training has improved their practice and that the videos have increased children’s interest and engaged them in the classroom. They feel that visual learning allows children to relate to the subject matter better and remember it as opposed to the earlier ways of teaching. They also feel that it makes teaching easier for them as children understand better with visual aids and are able to

¹⁵⁹ West *et al.*

¹⁶⁰ Snilstveit *et al.* (2015)

¹⁶¹ Kremer *et al.* (2013), cited in Conn (2014).

grasp concepts faster than when they had to draw or describe the lessons themselves. This has, in turn, increased teachers' morale and motivation to teach. Teachers remember the gender-sensitive teaching methods shared with them during DP-1 training and say that they use these tips in their classroom and have observed the results.

In Ghana, parents report that their daughters are doing better at school because they were getting extra classes. Some also spoke about quizzes that girls are involved in through the girls' clubs. Parents also report supporting and encouraging their daughters to revise and work in the evening before they go to sleep. In terms of performance, according to the parents, there is a mix: some were high performing girls, while some got lower marks.

Summary

According to interviews with the community and parents in all three countries, the value placed on education in communities, schools, and households is high. Parents want their girls to stay in school and continue their studies. However, schools still report that the value placed on education by parents is still a reason for girls dropping out. Parents in their turn report that poverty is the main constraining factor for children not being able to transition. This is widely supported by the literature, alongside other structural school-related issues such as lack of school in general, long distances between schools and homes, and unsafe journeys. Pregnancy is reported as an issue for girls in some communities in Kenya and Ghana, although according to teachers and parents these cases have been decreasing in recent years.

However, despite poverty, based on the transition outcome definition for this project, we find that the overall transition rate is high across the three countries. The reasons for such high rates can be explained via a number of factors that can be classed as system-relevant, for example activities undertaken by schools to support girls' performances or factors outside school initiated by communities and community leaders. As a result, the large majority of marginalised households manage to ensure that their girls progress through primary school and to secondary school despite the economic constraints. However, there is a smaller population of particularly marginalised groups in all three countries who are more at risk of dropping out. These groups could represent those country-specific marginalised groups we referred to in Chapter 3 and who have multiple characteristics of marginalisation. The reasons that keep those children out of school are often beyond the scope of the project – such as poverty or extreme poverty, which result in the child engaging in labour or migrating with their family, living in rural and remote settlements, etc. Such factors are not addressed by DP-2 and so it is unlikely to change the underlying factors of absenteeism and poor learning outcomes. In addition to these structural barriers, there are also factors associated with the social dimension of transition that we know very little about. For example, older girls might find it difficult to socialise with new children at the new secondary school and struggle socially in the new environment. Children could generally be affected and weaken their self-confidence/esteem.

4.3.2 Cohort tracking and target setting for the transition outcome

Given the panel nature of this study, we will track the cohort girls at each point of the evaluation. During the next round, cohort tracking will only take place at the school level as the evaluation will not be conducting a household survey at midline. Cohort tracking at the school level will involve a number of steps, namely: verifying whether the cohort girls are still enrolled at the same school; verifying the contact information of the girls enrolled; and investigating further with the school the whereabouts of cohort girls that are no longer enrolled. Our detailed cohort-tracking protocol for each phase of the evaluation is

described in Annex 14. This protocol will be adapted during the course of the evaluation, as additional guidance from GEC-T becomes available and based on learnings from the initial rounds of data collection.

As per the GEC guidance, we have been asked to propose transition targets for the next two evaluation points – midline and endline – for the DP-2 evaluation. Our recommendation takes into consideration: (i) the benchmark transition rates; (ii) the available secondary data on transition and primary completion rates; and (iii) the context in which the project is operating in each of the countries. Table 28 below shows the transition targets by country and evaluation point.

In Kenya, taking into consideration that transition will focus on progression within primary school (i.e. primary 5 to 6 to 7) and the already high levels of both the benchmark transition (96%) and primary completion rates (102%: World Bank 2016), we do not anticipate the project will have any impact on this particular outcome. Therefore, it would be our recommendation that the project maintains the current rates. Thus, targets for both midline (evaluation point 2) and endline (evaluation point 3) will be 0%.

In Ghana, we look at transition at two points: (i) transition from primary 5 to primary 6 at midline; and (ii) primary 6 to JSS-1. For the first point of transition, given that both the primary completion rate (99%: ESPR 2015) and benchmark transition rate (96%) are already high, it is our recommendation that the project maintains the same rate at midline. As for the second transition point, i.e. primary 6 to JSS-1, the rates reported in the secondary data are slightly lower (93%: UIS 2016) than that of the benchmark transition rate. However, given that the transition indicator for DP-2 covers a broader definition (including vocational, non-formal education, and appropriate employment), we would recommend that the project maintain the same rate. Thus, targets for both midline (evaluation point 2) and endline (evaluation point 3) will be 0%.

In Nigeria, the transition points are similar to that of Ghana. However, during both points, the transition benchmark rates differ quite drastically from those reported in the secondary data, even with the differences in the indicator construction. According to the secondary data, the primary completion rate for girls was reported at 96% in Kano and 102% for the 15 LGAs (ASCR 2016/17), whereas the transition benchmark rate overall was 86%. Similarly, the transition rate from primary 6 to JSS-1 for Kano State was reported to be 45% for the entire state and 43.5% for the 15 LGAs (ASCR 2016/17). Thus, given the differences in the rates for transition across both our data sources (i.e. DP-2 baseline and ASCR), and the contextual factors that affect transition in Nigeria such as the proximity of secondary schools, poverty, access to facilities such as toilets, the value placed on education by parents, etc., and also considering how well placed the project activities are to address the contextual factors/barriers, we recommend a more conservative target for Nigeria. Thus, we recommend a one percentage point increase from base to midline and an additional one percentage point increase from mid to endline.

Table 28: Transition – proposed targets by country and evaluation point

	Country	Baseline	Midline	Endline
Target generated by the outcome spreadsheet	Kenya	96%	96% (0 percentage point increase)	96% (0 percentage point increase)
	Ghana	96%	96% (0 percentage point increase)	96% (0 percentage point increase)
	Nigeria	86%	87% (1 percentage point increase)	88% (1 percentage point increase)
Alternative target proposed by the project (if applicable)	Kenya			
	Ghana			
	Nigeria			

4.4 Sustainability outcome

Sustainability will be measured at three levels: community, school, and system level (see Section 2.2 for further details of the approach). The GEC-T sustainability scorecard was applied to assess sustainability at each level. In Figure 33 we present the abridged sustainability rating – see Annex 21 for the full sustainability scorecard. Note that the GEC-T guidance defines sustainability such that ‘the project can demonstrate that changes it has brought about which increase learning and transition through education cycles are sustainable after the life-span of the project’.

Figure 33: Sustainability rating

0- Negligible <i>(null or negative change)</i>	1- Latent <i>(change in attitude)</i>	2- Emerging <i>(changes in behaviour)</i>	3- Becoming established <i>(Critical mass of stakeholders change behaviour)</i>	4- Established <i>(changes are institutionalised)</i>
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DP-2 has incorporated a variety of activities to support the sustainability of the project and it is worth noting that DP-2 builds on the foundations of work carried out under DP-1, although not all schools reached by DP-2 were part of the DP-1 project. The DP-2 approach to sustainability consists of engagement with key stakeholders at each of the levels identified above: community, school, and system.

The DP-2 approach to sustainability has a heavy focus on the school and community level. At the school level, DP-2 continues to strengthen positive school leaders and spread and deepen shared understanding of the value of education for all, including across parents and community members. This includes the identification of and investment in resource teachers who are expected to take on a lead role in supporting the training of new teachers as well as providing refresher training, coaching, and mentoring of existing teachers well beyond the life of the project. Resource teachers are also expected to champion the learning centres and demonstrate and model student-centred, gender-responsive teaching and learning in their lessons.

At the level of the community, DP-2 provides significant investment through community sensitisation and mentoring support to capacitate community members (with involvement from schools) to develop and implement CAPs that seek to address barriers to education with a focus on the particular needs of girls. It is expected that these efforts will support a gradual and continued change in the attitudes of communities

and parents toward schooling and what happens in schools, as well as provide both lasting support to schools and pressure on schools to perform.

However, DP-2 also recognises the need to support change at the grassroots level with government mainstreaming to achieve systemic change and has committed to generating high-level commitment, ongoing support, and growing buy-in from government partners, as demonstrated in some cases through the signing of high-level MoUs.¹⁶² DP-2 seeks to do this specifically by engaging in activities that aim to directly boost the capacity of local MoE education staff, involving them in project planning and monitoring processes, as well as in teacher training and school visits. Toward the end of DP-1, DLA was encouraging MoE counterparts to, where possible, take the lead in rolling out project training as well as monitoring schools as part of their training. However, it should be noted that the significant shift in focus mandated by DFID in terms of numeracy and literacy training has meant that, under DP-2, DLA has had to take over some of these activities in the short term.

At baseline, we draw mainly on two data sources to assess the level of sustainability at each level, i.e. baseline qualitative and quantitative data – see Figure 34. Project M&E data for DP-2 was not available at baseline as the project was in the initial stages of setting up its M&E system. One of the major drawbacks of the baseline assessment of sustainability is the lack of project M&E data, which is crucial to the assessment of some of the indicators. Therefore, it is important to note that the sustainability scores given at each level could be improved once more data is available from the project side.

Figure 34: Data sources for assessing baseline sustainability levels

Qualitative data	Quantitative data	Project M&E
<ul style="list-style-type: none"> • Group and individual interviews with community members (CAP, PTA, SBMC, and parents) • Group and individual interviews with school staff (head teachers and class teachers) • KIIs with MoE officials who were identified by DLA country teams to ensure that the relevant officials actually engaging with DP-2 were interviewed 	<ul style="list-style-type: none"> • School survey • Household survey • Girls' survey 	<ul style="list-style-type: none"> • Project M&E data for covering DP-2 was not available at baseline, therefore we had the DP-2 country teams review the questions in the sustainability framework and respond directly • We reviewed previous evaluation reports and DP-1 monitoring reports to provide context from pre-existing activities

In this section, we present the sustainability scores for each level and country and provide a brief narrative to discuss our findings.

4.4.1 How sustainable is DP-2 in Kenya?

Table 29 presents sustainability scores for each indicator at the community, school, and system level for Kenya.¹⁶³

¹⁶² Such as an MoU with the SUBEB in Kano.

¹⁶³ Annex 21 gives the sustainability score card.

Table 29: Kenya sustainability indicators

	Community*	School	System
Indicator 1:	Number of communities that have repeated the community action planning process after initial trainings Baseline score: 1	Number of schools that have enacted plans to continue active use of educational media Baseline score: 2	MoEs at the local level have enacted local education plans furthering project-related teacher development and school support Baseline score: 2
Indicator 2:	Community members expressing in FGDs or/and KIIs a desire to address girls' education needs after project completion Baseline score: 2	Number of schools that have conducted DP-2 training and coaching internally Baseline score: 2	Teachers report more engagement and support from local MoEs in KIIs and/or FGDs Baseline score: 1
Indicator 3:	Number of communities mobilising own resources to take collective action to support girls' education Baseline score: 2	Head teachers are able to describe the benefits of the project and express a commitment to sustaining them in KIIs and/or FGDs Baseline score: 1	Local MoE heads express desire and ability to continue project in KIIs Baseline score: 1
Baseline sustainability score (0–4)	2	2	1
Overall sustainability score (0–4, average of the three level scores)	2 (rounded)		

* In one school, members of the CAP declined to be interviewed by the team. Therefore, the views represented above only cover five schools and their communities.

Community level¹⁶⁴

Indicator 1: Number of communities that have repeated the community action planning process after initial trainings (Sustainability score: 1)

Limited number of CAPs developed in schools visited for the qualitative study. At baseline, with the exception of one school, community members interviewed by the qualitative research team had not developed CAPs. Therefore, it is too early to verify the project's finding that community members value the CAP process. However, the final evaluation of DP-1 indicated that at least 75 schools had taken concrete steps in enacting their CAPs, with examples of activities ranging from hiring of local watchmen, to community education, to partnering with local NGOs to better support the school. As such, it is reasonable to expect that once the process has been embedded a significant number of communities will engage with the process. In all schools, members were aware of DP-2 and held a positive opinion of the project, and in two schools where members had received the DP-2 training they had either been waiting for the term to begin or for a new head teacher to join before they could begin discussions of their action

¹⁶⁴ See Annex 22 for full details of the Kenya Sustainability Framework and evidence.

plan. In general, plans initially drafted at the community workshop do take some time for individuals involved in CAP activities to review and finalise with relevant colleagues and stakeholders.

Quantitative data suggests that 91% schools have completed a community workshop training in Kenya compared to 98% in Nigeria and 76% in Ghana. In the school in Wajir where the CAPs had been developed, there appears to be buy-in from the community and school; however, parents' involvement was not explicitly mentioned in the planning process or the plan. It should be noted that while the design of DP-2 seeks to encourage at least a few parent and community leaders to be involved in the CAP, typically from PTAs and SMCs, extensive representation of parents in the workshop is not the project aim. Instead, CAPs in many cases have targeted parents in the community for awareness raising or outreach of one type or another in support of girls' education.

In future rounds of research this indicator would strongly benefit from data from DP-2 M&E to identify the numbers of communities/schools trained in CAPs and the number of plans developed post-DP-2 training. Although there are positive indications that this process will support sustainability from the previous round of the evaluation, at this baseline stage for the evaluation of DP-2 the evidence suggests a score of 1 against this indicator.

Indicator 2: Community members expressing in FGDs or/and KIIs a desire to address girls' education needs after project completion (**Sustainability score: 2**)

Community members and parents are aware of the challenges children face in regard to enrolling, attending, and continuing their schooling, and believe that these challenges are similar for girls and boys, especially since parents face economic challenges. Parents have positive attitudes toward schooling and want their children to complete their education and attend university. In the quantitative survey, about 71% and 26% of parents stated that they '*strongly agree*' and '*agree*' that it is worth investing in girls' education even when there are financial constraints, respectively. The majority of parents (96%) also believe that a girl is just as likely to use her education as a boy. When probed further, parents indicated that certain issues such as early marriage and pregnancy affect girls disproportionately and result in them dropping out. We also find that some parents of the cohort girls believe that it is alright for girls to miss school if they are mothers (16%), if they are married (14%), or when they have to work or do chores at home (10%).

The individuals involved in CAP activities are aware of the project and state that the project overall – especially the TVs – was contributing to increased interest among children in attending school and learning. The girls' clubs or teacher trainings were not mentioned by individuals involved in CAP activities in their interviews, suggesting knowledge about these aspects of the project are low. It is worth noting that not all DP-2 schools would have clubs since some schools did not prioritise girls' clubs during their DP-1 CAP process. However, all the schools visited by the qualitative team had girls' clubs since it was one of the sampling criteria.

Our qualitative research finds that not all community members are aware of all the activities undertaken by the project – in some communities, the community leader was not aware of the project themselves. Parents were also not completely aware of the project and so were unable to comment on whether it was relevant to addressing barriers. Several community members have been contributing their time – for example ensuring that out-of-school children are sent back to school and their parents are counselled and provided resources. For example, sometimes when a parent cannot pay their fees, community members speak with the head teacher to allow the child to study and waive the fees. In other cases, they pay the

school fees themselves to improve access to and retention in schools. However, these contributions were made before DP-2 began. It is possible that in some cases these could have taken place as part of DP-1, and the final evaluation report from DP-1 certainly indicates some evidence of increased community engagement in education as a result of the project, although we do not have explicit evidence in support of this from this round of qualitative research. Unless awareness of the project increases significantly in the communities, their changes in attitudes and practice of supporting girls' education cannot be attributed to the project.

Indicator 3: Number of communities mobilising own resources to take collective action to support girls' education **(Sustainability score: 2)**

The communities we visited have been involved in supporting the school monetarily and with resources. In one school, when parents could not pay school fees, individuals involved in CAP activities spoke with the head teacher or school administration to allow the child to attend school and for the fees to be waived. In other cases, they raise funds to pay school fees themselves. The quantitative survey finds that 49% of parents and/or household members have either attended or are involved in a school committee/education group meeting. As part of their engagement in these committees they may have taken action to support students financially (9%) or to increase funding for schools (14%). When we spoke to parents about the support they can provide to their children's school, they usually mentioned paying fees as support as they do not have the economic means or resources to provide greater support. Therefore, the support coming from the community – often the Board of Management (BOM) or PTA – is usually from influential or wealthy members in the community. They do this by contacting 'self-help groups' to donate beds for the boarding facilities and seeds for the garden or employing parents to work in the school to build fences and to help provide an income to parents – which in turn is considered a contribution to the school fees of their children. As these contributions have been made over time and members have not developed a CAP yet, these actions cannot yet be attributed to the CAP as implemented in DP-2. However, the final evaluation report of DP-1 does indicate some evidence of concrete steps to enact CAPs, suggesting that this may well have supported some of these activities, although we do not find explicit evidence of this here. Furthermore, training and sensitisation from the project is likely to have sensitised parents to the needs of girls.

School level

Indicator 1: Number of schools that have enacted plans to continue active use of educational media **(Sustainability score: 2)**

Educational media materials were generally positively viewed among schools but some teachers report that the video contents are not aligned with the syllabus, and also felt that they were not aligned to Kenyan viewers. According to interviews conducted with schools, we find that the education media materials (i.e. videos) have positively influenced students to learn. School staff have developed plans to secure the media resources provided by DP-2 and enlisted the community's support to ensure the resources are maintained and kept in good condition. This is aligned with the MoU that is signed between the school and DLA in Kenya, whereby a DP-2 school takes on the responsibility to sustain and continue to develop the project by covering any ongoing running or maintenance costs related to the TV sets and DVD players provided by DP-2 (including the purchasing of insurance to safeguard the equipment, obtaining additional videos and other similar resources to supplement those donated by DP-2, allocating a designated room with safeguarding measures in place, ensuring an adequate power supply, and putting in place a credible replacement plan within 60 days in the event of lost or damaged equipment).

We found in one of the schools we visited in Nairobi that the learning centre equipment (i.e. TV) is insured with the support of the parents, while in another they built a metal enclosure for the TV that would keep it safe. Head teachers were confident that the video resources would continue to be used, not only because their teachers were trained in how to use it but also because they perceived a positive impact on their exam results. Another school reported purchasing additional DVDs on top of those provided by DP-2 to continue/extend the use of video as a teaching aid. However, it is important to note that the schools we visited were well-performing DP-2 schools, and these schools already have a certain degree of support from the community as well as active school staff. While there was a lot of positive feedback on the educational media, some teachers also said the content of the DVDs did not align with their syllabus. They also find it difficult and time consuming to identify relevant videos for their lessons, including preparing the TV and materials before class.

Limited exposure of students (i.e. girls) to the videos in school. We find that the use of videos within lessons was limited, as reported by the cohort girls. It is worth noting that, according to the MoU signed between DLA and the schools, the latter is responsible for ensuring full utilisation of the technology and content, as well as integrating the DLA-donated equipment and videos into their education process, and must maximise opportunities for teacher participation toward enhanced teaching and learning in the school. However, less than half (46%) of girls reported watching a video in school in the past year, even though all schools reported having access to electricity (80% from the national grid and 20% from solar panels). During the current academic term, only 10% and 23% of girls reported having watched a video during the week of the survey and the previous week, respectively. One potential explanation for the low numbers could be that the baseline was conducted at the start of the term. Project M&E data on usage of the learning centre via the logbooks is critical to properly assessing how often students are exposed to the learning centre. Therefore, at midline we will work with DP-2 to utilise both the M&E data and gather additional information at the school level.

Indicator 2: Number of schools that have conducted DP-2 training and coaching internally (Sustainability score: 2)

Step-down trainings are taking place in more than half the treatment schools that have received direct training from DP-2. According to head teachers and resource teachers surveyed in the treatment schools via the school survey, about 64% of schools reported conducting a step-down training session following direct training from DP-2.¹⁶⁵ According to data reported by head teachers and resource teachers via the school survey, of the total number of teachers in the school at baseline, on average nine teachers were trained directly by the project and about five teachers on average were indirectly trained by the school. Although it is positive to see that indirect training is taking place in the treatment schools, this does not seem to be happening across all schools visited at baseline. In Machakos, qualitative interviews with DP-trained teachers and head teachers found that teachers who have been trained by DP-2 come back and share what they have learned with other teachers. They also passed down the information on how to use DP-2 resources to teachers who had not attended the training and initiate new teachers into the school. They said that they have continued the practice of using DP-2 material, because it has aided learning in the school. However, the quantitative data (i.e. the school survey) suggests that the

¹⁶⁵ Data on direct and indirect training was provided by the head teachers and/or resource teachers gathered via the school survey in all treatment schools. Some schools were able to report the actual numbers trained directly or indirectly through proper records, while others were simply sharing the numbers from memory. Therefore, these numbers should be cross checked against the project M&E data once that is available. The school survey is a quantitative tool administered to the head teacher (main respondent) and resource teacher (respondent for specific modules around DP teacher training) in every evaluation school (i.e. in treatment and control schools, although the module on DP teacher training was only administered in treatment schools). See Annex 10 for details on the sampling methodology for this tool.

percentage of teachers trained indirectly is much higher in Machakos than the country average. In Nairobi's non-formal schools, according to qualitative interviews with head teachers, a teacher was assigned the responsibility to provide training to new teachers. Such school and teacher effort to sustain the training component is well defined in the MoU.

Teacher attrition is a common problem that affects schools in Kenya. In Wajir, where there is high attrition of teachers – the school survey data suggest that teacher attrition is 50% higher than the average of the five counties studied, and according to our interviews with school staff the school sampled for the qualitative baseline was unable to train new teachers on DP-2 methods, and expected the project to provide alternative arrangements. Disaggregated quantitative data (i.e. the school survey) shows that attrition is higher in Wajir and Kajiado. It is not clear whether training is embedded into an existing system in the school or teacher development plans and whether schools are monitored (either by MoE or BOM/CAP) to make sure that trainings are cascaded down – there is thus limited evidence that DP-2 training will continue to be shared internally within the school.

Indicator 3: Head teachers are able to describe the benefits of the project and a commitment to sustaining them in KIIs and/or FGDs (**Sustainability score: 1**)

Both head teachers and teachers understand the benefits of the project, but do not have strong convictions when it comes to sustaining all parts of the project, particularly the girls' clubs. Head teachers and teachers in the qualitative interviews demonstrated a clear understanding of the project's aims and believe that DP-2 has contributed to improvements in students' interest in learning and made them more eager to come to school. Most of the examples cited usually related to the TVs and use of educational media, and there was very limited reference to girls' clubs. Schools believe more support is required for girls than the girls' club or the school can provide. They are of the opinion that when it comes to issues of self-esteem or addressing the barriers girls face outside and inside school the school does not have the capacity to address them, but when it comes to educating children in the classroom that is their responsibility and within their capacity to influence. While schools may be keen on continuing to use video materials after the project ends, there was no strong conviction toward continuing the girls' clubs after the project ends. In one school, the head teacher said that if the girls' club mentor left the school, the knowledge of the club would leave with her.

System level

Indicator 1: MoEs at the local level have enacted local education plans furthering project-related teacher development and school support (**Sustainability score: 1**)

DLA, in collaboration with MoEs, developed an Accelerated Learning Strategy in April 2018 according to which DLA and government partners in Kenya will work more closely and in depth initially with a subset of schools to focus initially on primary 5 remedial learners in these selected schools. This is intended to be a non-remunerative effort that helps struggling learners with literacy and numeracy, recognising the increased focus on achieving these outcomes. However, given that the implementation of this strategy is still at an early phase, and that this strategy was not mentioned by MoE staff in our discussions with them, this indicator is given a sustainability score of 1 at this stage.

Indicator 2: Teachers report more engagement and support from local MoEs in KIIs and/or FGDs (**Sustainability score: 1**)

There is limited engagement and support from local MoEs in regard to the project. According to the MoU between DLA and the schools, the role of the MoE is to assist DLA in scheduling the workshops and giving guidance to both head teachers and resource teachers to set up training programmes for teachers in their respective schools. However, no such activities were reported during visits to the schools in Kenya as part of the qualitative research. MoE officials interviewed at baseline¹⁶⁶ spoke of their engagement with the project, and participation in the DP-2 trainings and rolling out of the project in the schools. One of the MoE officials felt the interaction with DP-2 schools was not as frequent as they would have liked, and another official felt that the project was responsible for and did monitor schools frequently. Interviews with teachers and head teachers in all schools in the qualitative sample do not record increased engagement and support from MoEs with regards to the project. Staff in schools also felt that the MoE does not have the resources to sustain the project after DP-2 withdraws support. A similar picture was observed in 2016 and reported in the final evaluation report of DP-1, which suggested that, 'despite DP's engagement with MOE towards sustainability, the MOE could not provide any concrete response regarding their plans for continuing DP and they were not aware of any plans in the works'.

Indicator 3: Local MoE heads express desire and ability to continue project in KIs (**Sustainability score: 1**)

MoE officers at sub-county level believe that the project is improving learning in schools, view the project favourably, and believe it should continue. However, they are not aware of any budgetary allocations or provisions made by the government in order to sustain the project. In one interview, the officer was positive that schools would be able to sustain the project within the schools if they find sponsors from the community, but there was no mention of sponsorship from the government to be able to facilitate the activities of the project to continue.

DP-2's strategy for sustainability rests heavily on the assumption that the resources necessary to sustain project activities after project completion will be generated at the grassroots level through efforts to engage schools and communities on the value of project activities in supporting improvements to education outcomes. This includes the maintenance of media resources and the training of new teachers (through resource teachers).

DP-2's strategy also assumes that, through engagement with the MoE (and in Kenya in particular at local levels of the MoE), MoE staff will mainstream project-supported teacher development within the government's in-service teacher training and teacher coaching, to be implemented during school monitoring and support visits. DP-2's assumption is that this can be achieved with no additional financing. However, this assumption seems at this stage weak, in particular when the findings of the final evaluation of DP-1 are taken into consideration. These explicitly refer to limited MoE funds and the numerous and competing other education initiatives and their effect on MoE staff time and resources, detrimentally affecting their ability to monitor and coach teachers. While it is too early at this stage of the evaluation to make definitive statements, in a context of high teacher turnover that might also include turnover of key school staff members such as the resource teacher there is a risk that the project will not be self-sustaining at the level of the school or community. As such, there is a risk that if MoE support for DP-2 activities is not regularised in both education sector plans and education sector budgeting, there will be slow erosion of support from the MoE, particularly as local MoE staff familiar with the project move to other positions.

¹⁶⁶ Based on two interviews with MoE officials at sub-county level.

Table 30: Kenya – changes needed for sustainability

	Community	School	System
Change: what change should happen by the end of the implementation period	The community – including the wider community such as all community leaders, parents, and PTA – should be made aware of all of DP-2 activities and the objective of these activities	The school should have embedded in its plans a schedule for training new teachers and refreshing old trainings. For this to happen, schools need the requisite resources (including time) to sustain project activities. MoUs signed with schools indicate that schools need to have set up project management committees and nominate volunteer coordinators	The MoE does believe that the project’s goals are in line with what the MoE wants to achieve. The MoE has not yet developed a policy or plan to sustain the project’s activities after the project ends, though DLA expects this to happen as they begin to see the impacts of project activities. If this already exists, then officers at all levels ought to be aware of the plan – which was not the case at baseline. Plans of resources allocated toward the project – both in terms of budgetary allocations and officers who can support and monitor the project – need to be shared with the schools from the beginning of the project. An Accelerated Learning Strategy Plan was developed in April 2018 and seems promising. However, it should be noted that this document does imply certain resources that will be required for implementation such as additional work for resource teachers, resources for organising remedial work, and setting up of referral mechanisms for children with learning disabilities
Activities: What activities are aimed at this change?	<ul style="list-style-type: none"> - Project entry/introduction - Signing of MoUs between DLA and each school community supported by the project - Development and implementation of a CAP (if not multiple CAPs) - Complementary leadership action plans (coming out of Leading for Change workshops with formal school leaders and the local MoE) 	<ul style="list-style-type: none"> - DP-2 trainings and cascade trainings - Project management and sustainability plans - Engaging local MoE in follow-up monitoring 	<ul style="list-style-type: none"> - Sustainability plan at MoE for all levels (national, county, sub-county) - Efforts to engage the MoE at policy level to ensure that the system is regularised - Efforts to engage MoE to ensure that a regularised budget line item is provided for expenditure related to DP-2 activities - Activities to identify roles and responsibilities for MoE staff to take over activities central to DP-2

	- Training of community leaders as part of CAP processes		
Stakeholders: Who are the relevant stakeholders?	Besides the participants in the community workshop, the chief of the village and the parents are relevant stakeholders	The head teacher, girls' club's mentor, and DP-2 resource teachers are key stakeholders in sustaining the project in the school. The CAPs can also provide support toward planning and allocating resources for these activities	MoE officers (at all levels) Head teacher School leadership and stakeholders
Factors: what factors are hindering or helping achieve changes, e.g. people, systems, social norms etc.?	<p>Economic disadvantage – where parents cannot pay the fees in the school – and lack of parental education makes parents feel that they do not have the means or the understanding of how they can contribute to the school.</p> <p>As CAP members have not begun to develop a plan for the school, it is premature to identify indicators that hinder change.</p> <p>Parents (with a few exceptions) see the value of education and want their children to succeed, i.e. transition to higher education and get a job. We assume that as a result they would be positively inclined to participate in the school's activities</p>	<p>The schools see tremendous value in the TV and video resources and have made the requisite arrangements to secure these resources, but they do have some concerns that some video content is not fully aligned to the experience of girls in Kenya, as well as not yet being convinced about the contribution of the girls' clubs. In order for them to invest their own resources, they need to be convinced of the purpose and value of these activities or the project needs to work more closely with schools to develop a plan for inclusion of content that is better aligned to the syllabus / experiences and understanding of children in Kenya.</p> <p>Clubs asking for financial contributions or applying strict eligibility criteria can exclude girls from the most marginalised households.</p> <p>The resource teachers have a critical role in sustaining DP-2 at the school level, which makes project sustainability vulnerable if the reosurces teachers leave the school.</p> <p>Transfer of teachers or head teachers may</p>	<p>Local MoE staff play a key role in the training and coaching of teachers during visits to schools. However, the final evaluation of DP-1 noted that limited resources and a multitude of activities competing for MoE staff time represented real risks to the sustainability of the programme.</p> <p>If MoE support is not regularised in education sector plans and budgets there is a risk that this support will gradually be withdrawn, as other priorities take over</p>

		<p>negatively affect the sustainability of the project.</p> <p>The Accelerated Learning Strategy is introducing an incentives mechanism to conduct remedial classes, leaving this activity vulnerable if these incentives were withdrawn</p>	
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At baseline, it is not evident that DP-2 has developed a plan to ensure that the project is sustainable at all levels once implementation stops. Indeed, if such a plan has been developed, evidence at baseline shows that stakeholders at all levels are unaware of its existence. Stakeholders do not have a clear idea of the duration of DP-2 and when the project will end, or what their role is in ensuring that the project is sustainable once it does end. At the MoE level, the lack of resources allocated to monitoring activities and sustaining the training and infrastructure provided by the project to schools reduces the possibility of sustained systemic change. As a result, a shift in education policy, change in MoE officers, or introduction of new non-governmental or government-supported projects might restrict involvement at the system level. It is worth emphasising, however, that the project itself is designed to be sustainable primarily at the school and community levels. Nonetheless, future rounds of research will continue to investigate this issue.

At the school level, transfer of teachers and head teachers, especially in Wajir, threaten the continued benefits of the DP-2 training, especially since all schools do not conduct step-down trainings. As all resources are subject to wear and tear, theft, and damage, the resources provided by DP-2 are unlikely to remain in the schools for a sustained period into the future. While some schools have insurance for TVs, this is not the case in all schools.

At the community level, the lack of information on the project among key community leaders and parents suggests that it cannot be sustained if current CAP members migrate out of the community or if they lose interest in their role, which is especially an issue when their children graduate out of school. The sustained implementation of the project requires key pillars in the community such as the chief and deputy chief and all the parents in the school to be aware of and buy into the project's activities. It is difficult to see how the momentum created by the project will be sustained if mass awareness of and support for the project does not exist. This finding seems to be reinforced by findings from the final evaluation of DP-1, which suggested that *'most [Board of Management] members could not provide much information on specific, concrete plans for the continuation or strengthening of DP activities in the future'*. However, despite this it is worth noting that DP-1 monitoring data suggests that almost three-quarters of CAPs were implemented in part at least, with community members managing to raise funds for activities like constructing or repairing school infrastructure, providing basic needs for marginalised girls, or monitoring the attendance of students. This finding is supported by the DP-1 final evaluation report. This suggests that the CAP model retains great potential (evidenced by results achieved in the previous phase), although it is important to remain aware of the apparent lack of understanding of project activities among key community leaders that we observed in this round of the evaluation.

Overall, the sustained impact of the project is threatened by factors such as poverty and hunger among students, limited resources in school (e.g. drinking water, hot cooked meals, and text books), extreme weather conditions such as floods and drought, and insecurity in certain areas. These factors create a significantly complex backdrop against which the project is being implemented and can affect the continued existence of attendance, transition, teaching, and learning in the school, and thus affect the future of the project. While these factors cannot all be controlled by the project, these risks need to be considered when planning for sustainability at all levels in the future.

4.4.2 How sustainable is DP-2 in Nigeria?

Table 29 presents sustainability scores for each indicator at the community, school, and system level for Nigeria.¹⁶⁷

Table 31: Nigeria sustainability indicators

	Community	School	System
Indicator 1:	Number of communities that have repeated the community action planning process after initial trainings Baseline score: 3	Number of schools that have enacted plans to continue active use of educational media Baseline score: 2	MoEs at the local level that have enacted local education plans furthering project-related teacher development and school support. Baseline score: 2
Indicator 2:	Community members expressing in FGDs or/and KIIs desire to address girls' education needs after project completion Baseline score: 2	Number of schools that have conducted DP-2 training and coaching internally Baseline score: 3	Teachers report more engagement and support from local MoEs in KIIs and/or FGDs Baseline score: 1
Indicator 3:	Number of communities mobilising own resources to take collective action to support girls' education Baseline score: 2	Head teachers are able to describe the benefits of the project and a commitment to sustaining them in KIIs and/or FGDs Baseline score: 1	Local MoE heads express desire and ability to continue project in KIIs Baseline score: 2
Baseline sustainability score (0–4)	2	2	2
Overall sustainability score (0–4, average of the three level scores)	2 (rounded)		

Community level

Indicator 1: Number of communities that have repeated the community action planning process after initial trainings (**Sustainability score: 3**)

The majority of schools have received CAP trainings and have developed action plans, but how frequently this happens, the quality of these plans, and the degree to which they have achieved their goals is yet to be determined. According to the DP country team, CAPs are revised twice a year and are usually developed once the initial plans are deemed to be accomplished. The CAP process is valued and from DP-2's perspective has enabled communities to identify assets and resources around their communities to be used in addressing barriers to girls' education (note that project ownership and participation in community workshops has helped with this, and that 609 communities received the

¹⁶⁷ Refer to Annex 21 for the sustainability scorecard.

community workshop training, out of which about 309 communities are confirmed to have developed CAPs).¹⁶⁸ Across the treatment schools in the sample, 98% reported receiving training in community workshops I and II from DP-2 and most of the individuals involved in CAP activities interviewed as part of the qualitative study also confirmed having been part of this training. Project M&E data would be beneficial to verify the number of individuals trained per school in relation to the CAPs and also to understand further the model schools are taking to conduct training or knowledge sharing between new and more longstanding individuals involved in CAP activities. There are some concerns around how the handover of CAP activities to new individuals will impact the implementation of the committee plans specifically when it comes to changes in the views or priorities of new members and also the loss of institutional knowledge of those individuals involved in CAP activities that were trained by DP-2. We lack data on the quality and successful implementation of CAPs so far.

Indicator 2: Community members expressing in FGDs or/and KIIs a desire to address girls' education needs after project completion (**Sustainability score: 2**)

Awareness of DP-2 is low among the parents we interviewed, but an awareness and desire to address challenges in regard to education is evident. Community members are generally aware of the challenges facing the education sector. The desire to address educational needs is apparent because all communities visited by the qualitative baseline team found that community members contribute financially or in kind to schools, while the DP-1 final evaluation report certainly noted evidence that, in some communities, teachers and parents contributed funds to buy fuel and secure the learning centres as well as providing additional seating for students to participate in learning centre classes. DP-2 staff indicated to us that data from CAP implementation for DP-2 is forthcoming as these recently launched (focused on learning and transition), while monitoring data will be coming in over the months ahead. When it comes to transition, there is recognition that girls are most affected (respondent's mention that girls often marry early and fail to complete their schooling beyond secondary level) and transition is generally encouraged to this point. From the quantitative data, 95% of parents agree that a girl is just as likely to use her education as a boy and 84% of parents think that, even in the presence of financial constraints, it is beneficial to invest in a girl's education. In one of the communities we visited, a joint effort between the school and community resulted in the establishment of a JSS-1 class for girls. Parents also show support for specific elements of the project; for example, teacher training is considered by parents as critical to children's success in school.

Among the parents who are members of school committees, the majority (93%) have been involved in the PTA but less than 1% are involved in the CAP committee. Most parents interviewed as part of the qualitative study did not know of DP-2, and thus were not able to speak to the value of and/or their commitment to the project. The lack of awareness among parents of DP-2 is concerning given the project has been implemented since 2014. This also has implications regarding parents supporting its efforts after the project ends.

Indicator 3: Number of communities mobilising own resources to take collective action to support girls' education (**Sustainability score: 2**)

Communities demonstrate the capability to mobilise resources to address barriers or support actions in relation to education, but the sustainability of these actions is still in question. Head teachers and teachers reported that the community believe in the project, which is demonstrated by

¹⁶⁸ This is information provided by the DP-2 Nigeria country team and we have not received any project M&E data to verify this data. We will work with DP-2 during the next evaluation point to confirm these numbers.

religious leaders and the village chief's frequent use of religious gatherings (often after Friday prayers) to raise awareness among parents and encourage school attendance and enrolment as part of the CAP agenda. Head teachers also report reaching out to wealthy members of the community for monetary and non-monetary support. According to respondents, these types of engagement and support from the community were already taking place prior to DP-2, however, and it is worth repeating that the final evaluation report for DP-1 noted evidence that in some instances communities had already successfully mobilised resources. Although communities have demonstrated capability in mobilising resources, there are concerns around the sustainability of the approaches adopted. For example, community reliance on donations may be affected by economic fluctuations, given that communities are already marginalised. More evidence is needed on the types of resources mobilised and the sustainability of these resources.

School level

Indicator 1: Number of schools that have enacted plans to continue active use of educational media (Sustainability score: 2)

The absence of sufficient data on sustainability plans does not allow for a comprehensive evaluation of this indicator at baseline. Financial and structural constraints (e.g. the unreliable electricity supply) suggest that schools and communities' capacity to sustain project activities is limited. Data on the number of schools that have a sustainability plan to continue active use of the educational media was not available at baseline (apart from a sustainability plan from one school provided by the DP-2 team) and data on how frequently these plans are assessed by the project and internally within the schools have yet to be explored. DP-2 Nigeria indicated that learning centre/project management committees' development of learning centre management and sustainability plans and step-down trainings have been developed by schools to support ongoing use of the educational media. Moreover, documentation provided by the DP-2 team indicates that there should be learning centre management and sustainability plans in place based on the MoUs signed between DLA and schools. As per the MoUs, schools are expected to sustain the project, fully utilise the technology provided by DLA, and ensure the safety and maintenance of equipment provided. Although there is utilisation of the videos and some efforts to maintain the equipment and sustain project activities, no sustainability plans were observed in the sample of schools visited. As our assessment on sustainability is based on what was observed on the ground at baseline, the sample documents provided are not enough to significantly change our assessment score.

The DP-2 team also reports that there is effective learning centre usage by schools and teachers. According to the quantitative data, about 77% of girls reported having watched a video at the school in the past year. The success of the media centre relies to some extent on resources from the school both in terms of time and monetary needs. All head teachers interviewed reported that they face challenges sustaining the everyday operational costs of running the school. Security was mentioned as a concern with regards to the learning centres in most schools visited, and most schools had put in place security measures to protect the learning centre.

Across the evaluation treatment schools, 90% of schools reported having access to electricity either through the national grid (62%) or generators (37%). However, a reliable supply of electricity is a concern, with only 31% of schools reporting having a consistent electricity supply in the past five school days, about a third of schools reporting that they did not have electricity for 2–3 days out of the past five school days, and about a third of schools reporting not having had electricity for 4–5 days. Also, for schools with generators the cost of fuel is a factor that could impact the frequent usage of the learning centre. These contextual challenges and others are potential factors that could affect the ability of schools to sustain the

learning centre in the long run and having a sustainability plan that outlines how to mitigate these issues would be beneficial. In the absence of data on these sustainability plans, particularly from the schools themselves, we are not able to thoroughly assess this indicator at this stage.

Indicator 2: Number of schools that have conducted DP-2 training and coaching internally (Sustainability score: 3)

Evidence from our quantitative and qualitative assessment shows that schools are engaging in staff training and coaching. According to the school survey, about 81% of treatment schools reported having received DP-2 training and followed it with internal training. As reported by schools, on average, 6.7 teachers were directly trained by DP-2 per school and 5.2 were indirectly trained. Overall, teachers view direct and indirect training in a positive light, stating that it has increased their confidence and teaching capability. The majority feel that direct training is done by 'professionals with university-level education' (who thus deliver better training). However, head teachers and teachers in the qualitative interviews reported that the step-down trainings conducted internally by schools were often conducted in Hausa, which is perhaps a function of the finding that some Nigerian English literacy teachers were not fully fluent or fully confident in English themselves. The step-down trainings are usually conducted via a flexible schedule within schools, as opposed to the direct training where teachers felt all content was covered in a short time span. Respondents reported that step-down trainings take place over a longer time span since they prefer to conduct the trainings bit by bit within shorter sessions available to them at their schools. Proper documentation on the step-down trainings conducted per school was not available, meaning that most of the verification was done simply by speaking to the head teacher or resource teachers. Data on both direct and indirect trainings per school should be gathered by the project to ensure the cascade model is taking place regularly and effectively. According to data from the school survey, in treatment schools on average 4.4 teachers per school (54%) were directly trained by the DP-2 for 2.4 days, while 4.6 (40%) teachers were indirectly trained for 1.6 days on average.

Attrition of trained teachers has sustainability implications and was identified as a challenge in schools. The attrition rate for direct training is 12.2%. The loss of trained teachers affects intermediate outcomes relating to learning outcomes, as the loss of trained teachers affects the quality of teaching within the treatment schools. DP-2 seeks to mitigate this risk through support to a core group of resource teachers that are expected to provide ongoing refresher training to existing teachers, as well as training teachers new to the school. However, given the importance of these individuals to the sustainability of project activities, there is an obvious risk associated with them leaving the school.

Indicator 3: Head teachers are able to describe the benefits of the project and a commitment to sustaining them in KIIs and/or FGDs (Sustainability score: 1)

Head teachers demonstrate clear understanding of the benefits of the project and commitment to sustaining it, but lack observable sustainability plans to carry this forward. Evidence on existing sustainability plans is based on data provided by the DP-2 team (signed MoUs stipulating that schools sustain project activities) and not from the sample of schools visited at baseline. Head teachers and teachers find that the learning centre and teacher trainings have been beneficial to the school's performance. A clear understanding of the project is likely to have a positive impact on implementation and attainment of outcomes. Discussions with the SBMC and head teachers suggest that there is some level of commitment to DP-2, as demonstrated by schools' ongoing actions to sustain project activities (e.g. funds raised by girls' clubs through selling crafts are used to buy fuel for the school generator).

System level

Indicator 1: MoEs at the local level have enacted local education plans furthering project-related teacher development and school support **(Sustainability score: 2)**

MoE officials have not enacted a local education plan to sustain the project. Interviews with the MoE indicate there is intent to continue with the project but they were not able to provide a specific or detailed plan aimed at sustaining the project other than intentions to align DP-2 activities with national development plans. According to the DP-2 Nigeria team, MoE officials are engaged with project activities such as supporting schools with step trainings and participating in the identification of students for the remedial classes that are to start, while they have also committed to supporting monitoring activities.

This finding is also similar to the experience of DP-1, with the final evaluation report reporting that, *'despite its popularity, few [SUBEB] respondents were able to describe concrete, actionable steps in their plan to sustain DP effects'*.

Nonetheless, there is a MoU between the Kano State SUBEB and DP-2 that clearly defines the roles and responsibilities of both DLA and the MoE in the delivery of project activities. The document emphasises the strong and active role of the SUBEB in the coordination and design of project implementation, and provides an excellent starting point for the engagement of MoE officers in project delivery.

Indicator 2: Teachers report more engagement and support from local MoEs in KIIs and/or FGDs **(Sustainability score: 1)**

Teachers report limited engagement and support from the MoE. DP-2 asserts that the local MoE has been engaging with schools, while qualitative interviews with teachers did not report any direct engagement with schools. There is insufficient evidence at this stage to determine the level of engagement by the MoE at this stage.

Indicator 3: Local MoE heads express a desire and ability to continue the project in KIIs **(Sustainability score: 2)**

MoE officials express interest in continuing the project and indicate that they conduct their own routine M&E, although not specifically targeted at DP-2. Similar to the schools, our interactions with MoE heads suggest they are interested in continuing the project. However, the MoE could not provide a specific plan aimed at sustaining the project other than intentions to align DP-2 activities with national development plans. DP-2 also indicated that the MoE does not yet have the financial and human capacity to continue its support to project activities after project completion. Reports from the qualitative visits to schools suggest there is little to no support provided to schools by the MoE. A recurring concern across the schools is the transfer of teachers to other schools following training and head teachers state that DP-2 teachers are often transferred to other schools. This suggests that the MoE appears not to factor in the time and resources invested in training staff only for the teachers to be transferred to other schools (some of which might not be DP-2 schools). This has implications for the overall sustainability outcomes of the project.

As with the case of Kenya, DP-2's strategy for sustainability in Nigeria rests heavily on the assumption that the resources necessary to sustain project activities after project completion will be generated at the grassroots level. Furthermore, the project is seeking MoE integration of project activities into the existing TPD and learning plans and priorities, including within MoE in-service teacher training and monitoring and

support visits to schools. While the project as it is implemented in Nigeria certainly has advantages in terms of the high-level MoU that has been signed with the SUBEB in Kano, which represents a considerable commitment to DP-2 on behalf of the MoE, it is, at this baseline stage, still too early to definitively state whether this will lead to the regularisation of MoE activities as is expected under DP-2, which to be fully sustainable should be enshrined in education sector planning and budgeting. Nonetheless, the MoU does represent a clear commitment to this engagement.

Table 32: Nigeria – changes needed for sustainability

	Community	School	System
Change: what change should happen by the end of the implementation period	The community needs to be made aware of the project and its objectives, particularly parents, who seemed to have little knowledge about the project. The CAP should be involved in monitoring of their own activities as well as contributions to schools to inform their own understanding of their progress and results	Schools need to have a systematic approach to monitoring and reviewing their plans. A schedule for step-down training is also needed and innovative fund-raising approaches should be identified. This will require support with resources and training	The MoE should have a plan for sustaining DP-2 activities, where project activities align with national policies. Budget and personnel allocations for these activities need to be considered. The MoU between DLA and the Kano SUBEB provides a clear articulation of the roles and responsibilities of the SUBEB in delivering project activities and promoting engagement with DP-2 schools. In this sense it is quite different from the MoUs signed with schools in Kenya, which did not contain such specificities. This document provides an excellent framework for the engagement of the MoE, and efforts should be put in place to continue to support the regularisation of MoE support to project activities
Activities: What activities are aimed at this change?	<ul style="list-style-type: none"> - Long-term planning to develop and sustain CAP capacity and activities through transfer of skills and knowledge sharing among the PTA and individuals involved in the CAP process - Increased involvement of parents in CAP activities, although outreach to a large number of parents is not the aim of DP-2 	<ul style="list-style-type: none"> - DP-2 trainings and cascade training - Development of a systematic monitoring system of school plans - Investment in media equipment in schools - DP-2 support to the development and enactment of learning centre management and sustainability plans 	<ul style="list-style-type: none"> - Engagement between DP-2 and MoE on policy alignment with project activities - A MoU has been signed between DLA and MoE - A remedial learner and accelerated learner strategy has been developed in partnership with the SUBEB

Stakeholders: Who are the relevant stakeholders?	Individuals involved in CAP activities, the village chief, and parents	The head teacher, girls' club mentor, and DP-2 resource teachers are key stakeholders in sustaining the project in the school. CAP members support the school by planning and allocating resources for these activities	MoE officers (at all levels) Head teachers Individuals involved in CAP activities
Factors: what factors are hindering or helping achieve changes, e.g. people, systems, social norms, etc.?	<p>Cultural practices are still deeply rooted within communities and girls marry at a young age, which limits their chance to receive an education beyond secondary school.</p> <p>Loss of critical members of the CAP and PTA.</p> <p>Poverty, limited financial capacity, and limited education levels may affect levels of understanding of the project and also commitment to it</p>	<p>Attrition rates of DP-2 trained teachers increase the burden on already understaffed schools.</p> <p>Financial and infrastructural constraints mean schools rely on donations from an already marginalised community to sustain project activities</p>	<p>Local MoE staff play a key role in the training and coaching of teachers during visits to schools. However, the final evaluation of DP-1 noted that limited resources and a multitude of competing activities on MoE staff time represented real risks to the sustainability of the programme.</p> <p>If MoE support is not regularised in education sector plans and budgets there is a risk that this support will gradually withdraw, as other priorities take over. Having said this, DP-2 has made an excellent start with the signing of the MoU with the Kano SUBEB</p>

The findings from the baseline evaluation suggest that there are some efforts by DP-2 toward sustainability, although mostly latent across all the levels of analysis and lacking sufficient evidence. At the community level, communities demonstrate a capability to mobilise resources to address barriers or support actions in relation to education. However, the sustainability of these actions is still in question. We lack data on the quality and successful implementation of CAPs so far, but CAP training has been received in most communities. There remains a lack of awareness among stakeholders, particularly parents, about the project's objectives, which has implications for parents supporting efforts after the project ends. However, in comparison to Kenya, CAPs seem to be actively implemented in the communities visited and community members demonstrate good engagement in the activities, with the exception of parents. If the project has demonstrable results and meets the expectations of communities and schools, there is a good chance of project activities being sustainable given that CAP communities are already showing some positive results and commitment.

At school level, respondents report that there are some ongoing activities to sustain the project in alignment with the MoU framework (e.g. training, coaching, and reinvestment of funds raised from the girls' club toward school maintenance). However, head teachers report that schools continue to face challenges in terms of the everyday operational costs of running the school; such constraints affect the extent to which schools can sustain project activities. The attrition of trained teachers also has sustainability implications and was identified as a challenge in schools. Such structural barriers are likely

to affect the sustainability of the project at the school level, but nonetheless there are good indications that if the community continues to support the school strongly then schools would receive the necessary support from communities and continue DP-2 activities.

At system level, the MoU signed between the Kano State SUBEB and the project in April 2016 outlines the implementation of replication and sustainability activities beyond 2016. According to that document, the SUBEB is responsible for ongoing monitoring and support to all 500 schools, continuing to promote school-led CAP and girls' clubs, conducting intensive sensitisation of local communities to create local ownership, and ensuring active use of learning centre equipment by schools and communities. It is unclear at this stage whether or not these actions have been fully implemented by the SUBEB to sustain the project, although staff there have expressed interest in continuing the project both at the end of DP-1 in 2016 as well as now in 2018. There is insufficient evidence at this stage on the level of engagement and support provided to schools by the MoE, apart from on routine monitoring conducted in schools. Alignment of project activities with national policies is imperative, requiring close engagement between DP-2, MoE, and schools. If the MoU is fully implemented then there is a very good chance that the project will be sustained given that the SUBEB will support schools to continue teacher training and functioning of learning centres. There is a possibility that a positive start to the project with SUBEB involvement in the past is the reason why we observe better community involvement and school engagement in DP-2 in Nigeria in comparison to Ghana and Kenya.

Overall, consideration of the barriers to sustainability will be critical to enacting plans to sustain project activities. As noted in our analysis, factors including infrastructural/capacity limitations, lack of awareness about the project, and engrained cultural beliefs around girls' education will continue to impact the delivery of the project and the sustainability of the project's activities.

4.4.3 How sustainable is DP-2 in Ghana?

Table 29 presents the sustainability scores for each indicator at the community, school, and system level for Ghana.¹⁶⁹

Table 33: Ghana sustainability indicators

	Community	School	System
Indicator 1:	Number of communities that have repeated the community action planning process after initial trainings Baseline score: 1	Number of schools that have enacted plans to continue active use of educational media Baseline score: 2	MoEs at the local level have enacted local education plans furthering project-related teacher development and school support Baseline score: 2
Indicator 2:	Community members expressing in FGDs or/and KIIs a desire to address girls' education needs after project completion Baseline score: 2	Number of schools that have conducted DP-2 training and coaching internally Baseline score: 1	Teachers report more engagement and support from local MoEs in KIIs and/or FGDs Baseline score: 1

¹⁶⁹ Refer to Annex 21 for the sustainability scorecard.

	Community	School	System
Indicator 3:	Number of communities mobilising own resources to take collective action to support girls' education	Head teachers are able to describe the benefits of the project and a commitment to sustaining them in KIIs and/or FGDs	Local MoE heads express a desire and ability to continue project in KIIs
	Baseline score: 2	Baseline score: 1	Baseline score: 1
Baseline sustainability score (0–4)	2	1	1
Overall sustainability score (0–4, average of the three level scores)	1		

Community level¹⁷⁰

Indicator 1: Number of communities that have repeated the community action planning process after initial trainings (**Sustainability score: 1**)

CAPs were not available in all schools sampled by the qualitative team at baseline. Of the communities we spoke to, more than half of them were yet to develop a consolidated CAP. The qualitative interviews found that community members had different understandings of DP-2 activities and their role as individuals involved in CAP activities. As most of them had received an initial orientation about DP-2, they were broadly aware of what the project was aiming to do. However, participants in the community action planning process could not articulate specific plans or were unable to provide evidence of a plan in the qualitative schools sampled. This indicator would strongly benefit from data from the project M&E to identify the number of communities/schools trained in CAPs and the number of plans developed after DP-2 training.

Indicator 2: Community members expressing in FGDs or/and KIIs a desire to address girls' education needs after project completion (**Sustainability score: 2**)

The attitudes of parents and communities toward girls' education are largely positive and encouraging, but financial constraints represent a major barrier to continuing education. In Ghana, most parents spoken to as part of the qualitative fieldwork were motivated to send their daughters to university or higher. Further still, very few parents spoke about getting their daughters married after school. In the quantitative survey, 70% of parents strongly agree that it is worth investing in girls' education even when there are financial constraints. Moreover, 98% of parents agree that a girl is just as likely to use her education as a boy. Despite this motivation and generally positive outlook, however, the lack of financial resources to be able to support their child's education and procure school supplies posed a challenge to children continuing school. Quantitative data shows that 59% of parents said that they or

¹⁷⁰ See Annex 22 for full details of the Ghana Sustainability Framework and evidence.

any other household member were part of a committee that monitored student attendance. Fewer parents said that they were involved in a committee to raise funds (20%) or provide financial support (4%).

CAP members – who were often also PTA/SMC members – were motivated about the project, but there was less clarity on what their roles were. There also seems to be a link between the individuals involved in CAP activities and PTA/ SMC members, and there was a clear overlap between CAP membership and PTA membership in most communities. This is by design as PTA and SMC representatives are invited to participate in the CAP process in their capacity as leaders representing parents and the community at large; after all, building on existing mechanisms is more likely to be sustainable than investing in new structures.

Most parents interviewed as part of the qualitative study had some awareness about DP-2 activities, but nonetheless there is a need to create more. Parents generally had limited information about DP-2 activities. Some parents did speak about video lessons in school, and they also discussed how visual evidence helped their children learn about new animals, new places, etc. that they then came home and told them about. Some parents did mention extra classes being organised that were attended by their children, which they thought was an encouraging step and one they wanted to involve their children in.

Indicator 3: Number of communities mobilising own resources to take collective action to support girls' education (**Sustainability score: 2**)

The community is involved in financing and securing learning centres and DP-2 equipment. CAP members were involved in managing the learning centre, DP-2 equipment, and materials, as well as ensuring that the DP-2 rooms and materials had adequate equipment and facilities. Indeed, the final evaluation report for DP-1 noted that, *'DP has had the most success in inspiring the community to secure the learning centre'*. This round of qualitative research found that some participants in CAP activities and schools hired security personnel or facilities, while in other cases CAP participants monitored the equipment themselves.

Further, another common issue that came up is the payment of the school's electricity bills through community contributions. Some CAP participants mentioned that soliciting community contributions was challenging. However, given the overlap between the CAP and PTA/SMC members, it is difficult to segregate the activities of the CAP and PTA/school committees' actions, especially around paying electricity bills, which seemed to be more an existing PTA/committee mandate than a CAP one.

While we have given this indicator a score of 2, the DP-1 final evaluation report indicates the need for caution about the ability of communities and schools to mobilise resources, stating that *'most of the challenges revolve around the lack of financial resources [available to communities and schools]'*.

School level

Indicator 1: Number of schools that have enacted plans to continue active use of educational media (**Sustainability score: 2**)

Teachers in Ghana had fixed timetables according to which they planned the use of DP-2 materials and tools. One teacher said that for every five video lessons, they had two for literacy and two for numeracy. Most schools had timetables according to which materials were to be used. A few schools reported that they had noticed an improvement in learning, such as children speaking in English, learning

to spell better, or getting better at arithmetic. The lack of adequate materials and textbooks to build on what students learned in the videos was a barrier for teachers, however, as they felt that they did not have the material required to put these concepts into action.

Limited numbers of formal sustainability plans are currently available, even though such documentation is mentioned as a key aspect in MoU documents. Our review of the documentation provided by the DP-2 team (i.e. an MoU and a learning centre management and sustainability plan from one school each respectively) sheds light on the more detailed mechanisms and requirements associated with the functioning of the programme at the school. The MoU mentions that the school will form a 'Project Management Committee', which will oversee the impact and sustainability of the programme, as well as develop a project management and sustainability plan to ensure proper care of the educational resources provided by the programme. Further, the MoU also states that the school is in charge of ensuring the safety of the equipment, as well as covering the running or maintenance costs of the project through existing resources or fund-raising.

In this regard, the assessment team at baseline observed that while there seems to be engagement with the community by means of community contributions in cash or human resources toward the safety and maintenance aspects of the equipment (as described in the previous section), the schools visited did not have explicit management and sustainability plans at this stage.

Limited exposure of students (i.e. girls) to videos in school. Further, we find that the use of videos within lessons was limited according to the cohort girls. Most of the girls we spoke to as part of the qualitative study did not directly mention the videos themselves, which came up in discussions with their parents and teachers. Some children did write of televisions in their diaries, but they did not actively mention watching the videos. Project M&E data on usage of the learning centre through logbooks is critical for properly assessing how often students are exposed to the learning centre. Therefore, subsequent reports will incorporate M&E data at the school level.

Given the lack of clear management and sustainability plans on the ground, despite the detailed mechanisms provided in the reference MoU document, the score for this indicator remains 2. In essence, our assessment on sustainability is based on what was observed on the ground at baseline and the sample documents provided are not enough to make a significant change to the assessment score.

Indicator 2: Number of schools that have conducted DP-2 training and coaching internally (Sustainability score: 1)

The frequency of internal trainings was variable, and direct teacher trainings still formed a larger component of teacher training. On average six teachers per school were directly trained by DP, and about three teachers on average received step-down training, as per the school survey. According to head teachers and teachers in the qualitative interviews, most of the internal trainings for the various modules were conducted on a needs basis and did not follow a set frequency.

Low levels of teacher attrition in Ghana increase the retention of knowledge from DP-2 training in school. According to the school survey data, the attrition rate for direct training is 9%, while for some of the other components it is between 4% and 9%, which is lower than the figures in the other countries. This is encouraging as it speaks directly to the absorptive capacity of the schools for the subsequent training modules.

Indicator 3: Head teachers are able to describe the benefits of the project and a commitment to sustaining them in KIIs and/or FGDs (**Sustainability score: 1**)

School-level stakeholders are generally positive about project-trained teachers' use of visual aids in improving learning outcomes. A few different schools reported that they were seeing some improvement in learning, such as children speaking more in English, learning to spell better, or getting better at arithmetic. Teachers also mentioned that earlier there were limited teaching and learning materials available, but now they were able to use maths sets, compasses, counters, and DP-2 materials, which all helped the children. In addition, teachers in general spoke highly of how the videos were able to keep the children engaged, also stating that showing children pictures as a way to teach maths (e.g. by identifying the number of animals in a picture) was exciting for pupils. Further, a few schools also mentioned that these tools were motivating children to speak in English because some children in the videos they watch during DP-2 lessons speak in English. Finally, head teachers expressed gratitude for the interventions and in particular that teachers continue to use these tools in their schools.

Despite the enthusiastic outlook of head teachers and teachers in regard to using and maintaining the programme equipment, there were limitations in terms of formal management and sustainability plans in the sampled schools. On the one hand, the MoU outlines in detail the school's overall commitment to the programme in regard to utilising the equipment and resources provided by DLA, ensuring the safety and maintenance of the equipment, and ensuring resources such as a power supply and a video room are available (if possible). On the other hand, most schools that were actually visited at baseline did not have specific management and sustainability plans at this stage. Thus, the lack of clear plan documents makes it somewhat difficult to observe whether tangible mechanisms are in place from the school's perspective to ensure sustainability at this stage.

Some feedback was raised by teachers in regard to tailoring the content of the videos and teaching and learning materials to the local context to make them more relatable for children. A concern raised by teachers in some schools was that at times these videos seemed a bit alien to the children because they were from a very different context that was not entirely relevant to them. For instance, the children were seeing videos about rice farming in Bangladesh and, while this was quite interesting for them, they could not relate to and absorb the message as such a context is different to that in northern Ghana. In addition, teachers mentioned that there was a paucity of adequate materials to carry out instructions in classes. Thus, even if the video lessons spoke about shapes and spaces, there were few materials such as rulers and protractors on hand to put these concepts into action. Indeed, lack of materials and textbooks was cited as a key barrier.

System level

Indicator 1: MoEs at the local level have enacted local education plans furthering project-related teacher development and school support (**Sustainability score: 2**)

MoE officials we interviewed spoke positively about DP-2 activities, but it is unclear if their regular monitoring visits include the monitoring of DP-2 activities. The MoE officials that were interviewed in the qualitative research spoke about the general mechanisms and methods of monitoring in their department, of which regular inspections represented a key component. DP-2 has in place district-level action plans developed in conjunction with district-level government counterparts.¹⁷¹ These include plans to use DP-2 equipment effectively, support the continuing functioning of DP-2 activities within the district, and monitor the use of DP-2 equipment. However, it is unclear at this stage of the evaluation whether or not these activities are being conducted and what the results of these activities are. The plan also identifies a range of resources for conducting these activities, which would require a financial investment

¹⁷¹ We have been provided with the plan for Karaga district as an example.

by the MoE and could present a risk to sustainability after project close, particularly given that the final evaluation report for DP-1 noted that MoE officials said financial constraints represented a potential threat to the sustainability of the programme.

Indicator 2: Teachers report more engagement and support from local MoEs in KIIs and/or FGDs (Sustainability score: 1)

No data is available to assess this indicator in either the qualitative or quantitative data sources. Therefore, we have given this indicator a provisional score of 1.

Indicator 3: Local MoE heads express a desire and ability to continue the project in KIIs (Sustainability score: 1)

MoE officials were positive about the project's teacher training and the use of visual aids but did not have plans to sustain activities. The MoE officials who were interviewed as part of the qualitative study were generally positive about teachers' use of videos in improving learning outcomes and felt that such interventions were useful in keeping children engaged and interested in class. They also spoke about the importance of the engagement and role of bodies such as the PTA/SMC in supporting schools. However, at this stage of the evaluation MoE officials could not articulate clear plans as to how the government would provide ongoing support to these activities going forward.

The project has engaged in collaborative meetings with Regional Education office and representatives from all relevant District Directors Offices in January and April 2018 on DLA's Accelerated Learning Strategy, more specifically the Remedial Support Strategy. As a result of this engagement, a rollout plan has been developed, with all stakeholders agreeing on the importance of this initiative and their respective roles. The implementation of the plan requires the involvement of a range of stakeholders outside the school, including the district director of education, district director in charge of supervision, circuit supervisors, district girls' education officer, community participatory coordinators, and district training officers. This is a resource-intensive plan, and similar to Ghana and Kenya sets out a reward system for teachers and head teachers. As discussed earlier, this could pose a certain risk to the sustainability of this particular activity of the project after it is over.

Table 34: Ghana – changes needed for sustainability

	Community	School	System
Change: what change should happen by the end of the implementation period	<p>In addition to the community members who are already engaged in the CAP or PTA/SMC, there needs to be a focus on engaging further with parents and community leaders who are not on such committees since their current level of awareness about project activities is quite low. More training is also needed to ensure individuals involved in CAP activities understand their roles and responsibilities – including clarity on how often the CAP is to be updated and some strengthening of the links between the CAP and school.</p> <p>We understand that the CAP is a tool for the school communities themselves to embrace and put to work toward their own objectives as specified in the plans. They are provided with the framework and good practices but define themselves what they want to do and thus take ownership. Although DP-2 does not require them to update the CAP or tell them how they 'have to' implement their plans, we suggest that individuals involved in CAP activities need to work closely with the school as part of the community</p>	<p>School-level stakeholders need to own specific components of project activities, including the learning centre management and sustainability plan, monitoring how the equipment is being used for different classes, and regularising training schedules for new teachers or refresher trainings.</p> <p>Increased consistency in how girls' clubs are operated in terms of frequency of meetings and monitoring methods is also required. This needs to be coupled with improving parents' awareness of girls' clubs, as there is little knowledge about them currently</p>	<p>Clear sustainability plans at the MoE level first require MoE officials be aware of the different aspects of the project, not just some components such as videos and teacher training.</p> <p>More consistency in project engagement with MoE officials in different districts in terms of regular meetings, update sharing to allow for lessons for the project to be fed back at regular intervals to improve their uptake, and mechanisms of knowledge sharing that would allow information to be retained even if MoE officers get transferred out or leave are required</p>
Activities: What activities are aimed at this change?	<ul style="list-style-type: none"> - To have a CAP in all schools - More active engagement strategy with parents not belonging to committees - Having clearer mechanisms for CAP members to meet and update activities - Having more coherence between school-level stakeholders and CAP participants through regular meetings 	<ul style="list-style-type: none"> - DP-2 trainings schedule - Development and implementation of a CAP - Monitoring mechanisms for girls' club activities - Maintaining teacher retention - Increasing internal trainings - Increased engagement with parents about girls' clubs activities 	<ul style="list-style-type: none"> - To have clearer systems and frequency of engagement in terms of meetings providing updates and lesson sharing - Advocacy with MoE to influence budget provision to schools since all these schools are government run - Improving MoE engagement at school level, for example through inviting them for internal training

		<ul style="list-style-type: none"> - Monitoring mechanisms on equipment use - Trying to get more feedback from children directly about videos and content 	
Stakeholders: Who are the relevant stakeholders?	<ul style="list-style-type: none"> - CAP members - DP-2 staff - Parents who are not part of PTA/SMC as they often get left out - Head teacher 	<ul style="list-style-type: none"> - Head teacher - Teachers - Girls' club patron - DP-2 staff/ resource person - CAP members - Parents 	<ul style="list-style-type: none"> - MoE officers (at all levels) - Head teacher - CAP members - DP-2 staff
Factors: what factors are hindering or helping achieve changes, e.g. people, systems, social norms, etc.?	<ul style="list-style-type: none"> - Most parents and communities are generally positive and motivated about girls' education, and there are few socio-cultural barriers hindering it except in very few situations - Financial constraints in paying fees and procuring school supplies are the key hindrance - Children dropping out to support parents via economic activities such as hawking or becoming porters - Teenage pregnancy a big concern in some limited communities 	<ul style="list-style-type: none"> - Relevance and appropriateness of content to local context as it can feel a bit alien and this influences what children are able to absorb - Paucity of supplies such as textbooks and geometric equipment - Class sizes are quite large and the PTR is very high in some schools - All trainings usually happen in working hours and this influences teaching 	At baseline we do not have enough information to be able to comment on this

At baseline there is limited evidence to suggest that the project is sustainable at all levels once the implementation comes to an end. At a community level, one of the key barriers seemed to be the lack of clear CAPs and a list of activities in most of the schools visited. This could be because in the original design committees are free to choose their own priorities, activities, and ways of working with schools and community members. However, this created a situation of CAP participants having not only different understandings of DP-2 activities but also of their role as CAP participants. For instance, a couple of communities mentioned monitoring as a key role, which involved them going around the community to encourage children who were out of school to go to school. In addition, some community members spoke about working with parents to encourage them to send their children to school, while also working with school staff to monitor the attendance and implementation of project activities from time to time. While these activities are not necessarily substitutes, and can be considered complementary activities, the challenge was that the modality of operation of these CAPs was inconsistent. Having said that, common answers regarding the focus points of CAP activities were the management and set-up of the learning centre, the provision of DP-2 equipment and materials, and working toward ensuring that the DP-2 rooms and materials had adequate equipment. It seems that the CAP model is primarily associated with learning centres. From a sustainability point of view, community members did allude to community support in the provision of security mechanisms for the learning centres given the equipment in them.

Given the overlap between the CAP and PTA/SMC membership bases, parents who did not belong to such committees had much less awareness about the project and what it was aiming to do. For some of the parents who were aware, their knowledge of the project was linked to remedial classes or the mention of video in some cases, but other than that they did not know very much about the background of the project. That said, we are aware that DP-2 is not aiming to engage with a broad number of parents in the CAP process as such.

At a school level, while there seemed to be motivation and enthusiasm about using the DP-2 tools, there was only limited evidence of how school-level stakeholders were engaging with the CAP. For example, there seemed to be some initial engagement to develop a plan together, but many CAP participants were subsequently not always clear about the ongoing role of the school in the process. Further, despite the existence of mechanisms in the MoUs to strengthen the sustainability aspect of programme implementation and the engagement with communities regarding the safety and maintenance of the equipment, the sampled schools did not have management and sustainability plans at this stage.

In addition, the functionality of girls' clubs varied substantially, and most of our school visits as part of the qualitative study found that, while these clubs were in existence, their frequency of meeting ranged from once a week to once a term. In addition, despite the positive outlook toward the videos, there was a limited number of children reporting watching these videos and using the equipment regularly. It is possible of course that these might have been introduced recently to some of these schools, but another factor could be the limitation on how many classes and children could share these resources given the class sizes and infrastructural barriers at the school level. Further project M&E data on the log of equipment would help to deepen understanding of this aspect in subsequent study rounds. Moreover, some teachers reported that in some cases the content of the videos was not tailored to the context, and this influenced how much children could comprehend them.

At a systems level, while MoE officials were positive about the project and in particular its use of visual aids, there was less clarity on how it would be continued. The MoE officials who were interviewed as part of the qualitative study were generally positive about trained teachers and their use of videos in improving learning outcomes and felt that such interventions were useful to keep children engaged and interested in class. They also spoke about the importance of the engagement and the role of bodies such as the PTA/SMC in supporting schools. However, at the moment there did not seem to be any clear plans in place for how the government could continue these activities going forward. There was also a focus on remedial classes and the use of videos, but other project interventions such as trainings seemed to come up relatively rarely in our discussions with them. This points to a need for more regular interactions or update sharing with MoE stakeholders to keep them abreast of developments, while also improving their understanding of the project toward increasing their uptake of the efforts the project is making. Strengthening the systems for regular communication would also support the project in the event these stakeholders are transferred out.

DP-2's strategy is explicit on expecting MoEs to be able to provide support to ongoing project activities within their existing financial and human resources. As is the case with DP-2 in Kenya and Nigeria it is, at this baseline stage of research, too early to say whether or not this strategy will be successful. Nonetheless, it is clear that MoE support to DP-2 activities will require the investment of financial and human resources. There is a danger therefore that if support to DP-2 activities is not regularised in education sector plans and budgets then engagement with the project will be eroded, particularly as district-level MoE staff move to other positions.

Conclusions

The sustainability strategy for DP-2 has a heavy focus at the school and community level in terms of generating support and ultimately ownership of project activities at this level, which includes the generation of resources to ensure the continuation of project activities. At the same time, DP-2 recognises the need to support change at grassroots level with government mainstreaming of activities to

achieve systemic change, which it hopes to achieve through direct engagement with the MoE at different levels and by involving MoE staff in project planning and implementation.

At the baseline stage of the evaluation, we find that across the three countries there has been varying degrees of success in the mobilisation of communities. Nigeria appears the most advanced in this regard and the baseline findings suggest that the CAP process is well valued and some communities have demonstrated a capacity to mobilise resources that address barriers to education. We find similar patterns in Kenya as well as in Ghana, albeit to a lesser degree. It is also worth noting that the final evaluation of DP-1 suggested that there was some evidence to suggest that the CAP process had had some success in mobilising resources. Indeed, DLA's own monitoring of DP-1 suggests that on average over the three countries just under 60% of CAPs had been implemented at least in part, with interventions ranging from support to school infrastructure to funding securing learning centres and extra support to marginalised children. However, securing of funds at this level remains a concern particularly for more marginalised communities.

At the level of the school, DP-2 is providing support to schools to develop sustainability plans for continuation of project activities. In this area Nigeria again seems to be the most advanced in terms of the evidence the baseline qualitative research found against the development of sustainability plans, followed by Kenya and then Ghana. At the level of the school a key threat to the sustainability of the programme remains the high rates of teacher turnover (for example, the final evaluation report for DP-1 noted that in Nigeria about 59% of DP-trained teachers had transferred to other schools in the year prior to the final round of research). DP-2's approach to mitigating this is through intensive support to both resource teachers as well as local MoE staff who have been trained by the project. However, this does mean that the project is reliant on several key individuals: the resource teacher can also transfer schools, while local MoE staff may leave or transfer elsewhere meaning that their support is under threat until this training has been internalised into in-service training by the MoE.

At the level of the system, DP-2 is active in engaging with the MoE at different levels and in all countries the project has engaged at the relevant national or sub-national levels. In Nigeria, an MoU has been signed with the Kano State SUBEB, which perhaps makes activities at this level the most robust in comparison to, for example, Kenya, where letters of encouragement and authorisation have been provided at the national level but MoUs have been signed rather with individual schools. DP-2 assumes that the support provided by the MoE will not require any additional resources, and that local MoE staff will be able to carry out teacher training and coaching as part of their regular monitoring and school visits. However, it is worth further interrogating this assumption, and this will certainly be carried out as part of this evaluation given the findings of the DP-1 final evaluation report that funding at this level is a concern, particularly when there are multiple initiatives that compete for local MoE staff time. Indeed, the qualitative research conducted for this baseline round of research suggests that this remains a concern. To achieve higher sustainability scores at this level, DP-2 will need to work toward the regularisation of MoE support into education sector strategies and budgets. It is in this regard that DFID should consider providing additional support to DP-2 given its access at these levels, and given that it would have the ability to lobby the relevant national or sub-national governments on behalf of multiple GEC-T projects.

It is not clear in the project documents (i.e. the MEL framework and other project documents shared) how DP-2 aligns with existing government policies and priorities in each of the countries. For example, the DP-2 sustainability framework outlined in the draft MEL framework document is lacking a component on financial sustainability. The GEC-T guidelines state that financial sustainability is a key part of overall sustainability and it is incorporated as part of the scorecard used to measure sustainability. The DP-2

assumes that the project is built in such a way as to not need continued external financing to be sustainable once the project ends. In order to have lasting effects, the project's sustainability strategy relies on strengthening school- and government-level capacities and on a commitment to integrate worthwhile project activities and inputs within their own plans and priorities, which is where the local (limited) financial and human resources are meant to be directed. Nevertheless, sustaining the project is impossible without certain resources for maintaining the equipment, teacher training, mentoring, and coaching. The implementation of the MoU alone will require resources to be in place, particularly for more disadvantaged areas, which may struggle using their own resources to implement DP-2 activities. The evaluation in future rounds of research will continue to investigate if the MoU has been implemented and, if it has not, will seek to find out the reasons (one of which could be financial).

5. Key intermediate outcome findings

5.1 Attendance

Attendance is a compulsory intermediate outcome indicator for all GEC-T projects. As part of this evaluation, we use the attendance indicator to measure whether girls are attending school more regularly as a result of the project due to increased enthusiasm for school, greater support on the part of the community for girls' education, etc. Drawing on the experience from DP-1 the project believes that the appeal of the media centres along with more gender-responsive and girl-friendly school environments and generally improved teaching methods will result in greater enthusiasm for school on the part of students. This will be in addition to greater support on the part of communities as a result of sensitisation efforts through the CAP process to support girls' attendance.¹⁷²

In this section, we present data from both quantitative and qualitative sources gathered at baseline. Quantitative data on attendance was gathered at the cohort level via school registers and attendance spot checks and at the household level through interviews with the primary caregiver or guardian of the child. From a qualitative perspective, we gathered data to understand the current status of school attendance and any barriers to girls' school attendance to examine the relevance of DP-2 to the local context and any progress the project has achieved so far on attendance. This was done through group and individual interviews with head teachers, teachers, parents, and individuals involved in CAP activities.

Overall attendance rates at baseline are relatively high across the three countries. Table 35 presents the average cohort attendance rate for the previous academic term (January–April 2018) for each country. In Kenya and Ghana, we find attendance rates were above 90%, with girls missing on average about three days and five days per term, respectively. In Nigeria, the attendance rate was lower than the two countries at 81%, with girls missing on average 10 days per term. We find the attendance rates are balanced across both treatment and control groups in Kenya and Nigeria (i.e. there are no statistically significant differences), but there are statistically significant differences in Ghana at the 95% confidence level.

At the household level, parents/guardians were asked how often the child (i.e. cohort girl) attended school during the current term (April/May–July 2018). The vast majority of parents/guardians reported that the child had attended 'most days' of school during the current term across the three countries (see Table 35).

¹⁷² See Annex 5 for further details.

Table 35: Cohort attendance, by country and treatment assignment

Country	Intervention Group Mean	Control Group Mean
School level: Attendance from school records (January –April 2018)^a		
Nigeria	80.7	80.7
Kenya	95.9	95.5
Ghana	92.2**	91.1
Household level: During this current term (April–Aug 2018), the girl attends school on ‘most days’ according to interviewed parent/guardian		
Nigeria	92.6	90.8
Kenya	92.9	93.3
Ghana	98.4	97.4

Source: Baseline school and household survey 2018

Note: ^a Cohort attendance data was available for 91%, 87%, and 98% of the cohort girls in Nigeria, Kenya, and Ghana, respectively. Statistical significance is denoted by *, **, and *** for the 10%, 5% and 1% levels, respectively.

5.1.1 Subgroup analysis by age group

Figure 35: Cohort attendance by age group and country

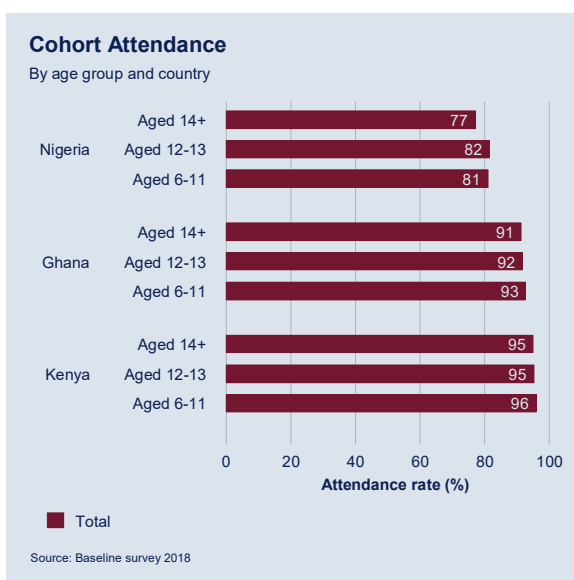


Figure 35 presents attendance by age group and country. In Kenya and Ghana, we see a somewhat steady and high attendance rate across the different age groups. However, in Nigeria, the attendance rate declines from around age 13/14. Reasons for this decline could be a range of barriers including economic factors, household chores, and seasonal and environmental issues. We discuss these barriers and others in further detail in the sub-section below.

5.1.2 Subgroup analysis by educational marginalisation and barriers

Contextual barriers affect the extent to which children are present in school, which in turn has implications for the project's impact. We draw on both the quantitative and qualitative data to explore the major barriers and marginalisation factors that affect girls' attendance. Table 36 and Table 37 present the breakdown of attendance rate by different education marginalisation characteristics and potential barriers.

Economic reasons

Economic disadvantage stands out as the primary barrier to attendance across all the countries according to the qualitative and quantitative fieldwork. As the project is operating in areas where beneficiaries are predominantly marginalised, children often have to contribute toward the economic well-being of their households. Some children, more often girls, arrive late to school as they are required to hawk for their parents early in the morning before going to school. In Nigeria, we see that girls who come from more impoverished households or are more likely to be poor have a lower rate of attendance (77%) relative to the overall average (81%) (see Table 36). It is also the case that girls in Nigeria that come from rural households (76%) have a lower attendance rate. However, in Kenya and Ghana we find that the attendance rate remains well above 90% across the different types of marginalisation indicators in Table 36. The case of Kenya requires further research in order to understand why, despite rates of economic marginalisation of children being relatively similar to Nigeria, there is still evidence of a higher level of school attendance in Nigeria.

Lack of economic resources also contributes to parents being unable to afford school-related expenses (e.g. school fees, exam fees, uniform costs, etc.). Parents especially struggle to pay these school-related expenses for several children or when one parent is the sole earning member of the family. Where livelihoods depend on the rains, people are less likely to afford these expenses during drought years and the family (i.e. parent and child) migrate to find work. Also, even though public primary schools are 'free', in the sense that they do not require school fees, additional expenses related to uniform costs, school supplies, and exam fees were cited as common reasons children's attendance might be affected.

Household chores

Household chores, including cooking, cleaning, helping on the farm, and looking after siblings, are one of the critical factors influencing girls attending school regularly across the three countries. Children's household work is seen as an integral part of their everyday roles and responsibilities, and is prevalent among boys and girls in both urban and rural areas. The qualitative data indicate that the incidence of children combining work with schooling is commonplace in all the countries. Working is an integral part of family life in which children are expected to participate and very much a norm rather than an exception. In some instances, children are required to fetch water for their parents due to the lack of access to water in the community. However, the quantitative data across the three countries, particularly in Kenya and Ghana, does not change relative to the overall average. In Nigeria, a slight drop is seen in children that help with agricultural work or family business outside the home (Table 37). In their diaries, the majority of the girls in Nigeria reported helping their parents after school with one domestic task or another, and none of the girls mentioned taking time out to complete school homework. In Ghana and Kenya, attendance rates remained the same across girls that were reported to have very high and high chore burdens. Slight variations were observed in Nigeria across the different barriers, but drastic changes were not observed (Table 37).

In Ghana, some teachers highlighted that the burden of household work was disproportionately on girls, who sometimes came to school tired and hungry, which influenced how much they could engage in the class. On the other hand, for boys in Ghana different stakeholders also mentioned that they were in comparison less punctual than girls generally, and this was often related to them either loitering around their community in their uniforms after leaving their homes or playing games in the street. Further, community leaders from a few communities also mentioned that as part of their duties they would drive around or walk around the community to see if children were loitering around during school hours.

There is a common view across all the countries that the type of work children do and the hours they work clearly affect their health and schooling when, for example, children get tired after work and cannot follow their lessons attentively or do not find time to study and do their homework. Girls seem to be particularly affected by this. However, we would still need to do more assessment of differences between urban and rural households and paid and unpaid work in order to make a more accurate judgement on the gendered division of work and its effect on girls' education.

Seasonal absenteeism and climate-related issues

Climate-related factors such as flooding and droughts seem to affect children's attendance in Nigeria and Kenya. For instance, flooding was reported to raise safety concerns for children who have to walk to school in both countries. In one of the villages in Nigeria, it was reported that, during the rainy season the overflowing of the river near the community affects pupils' attendance. Additionally, droughts and the monsoons affect the attendance of children in school across all the counties visited in Kenya. The effect of droughts on absenteeism was significant in Wajir, forcing families to relocate with their livestock to areas that are less arid in search of grazing land; as a result, children end up missing school. If schools do not have a boarding school on their premises, it is likely, as was mentioned in the school in Wajir that we visited at baseline, that the number of children at school reduces by a third during droughts. In Nairobi, the monsoon rains and lack of drainage around the project school have resulted in the school grounds flooding, which in turn affects school attendance. In Kenya, drought or the dry season also increases the chances of boys skipping school to mine or extract sand as engaging in this type of work helps them earn a daily wage. Often, boys skip school to extract sand without informing their parents. Droughts also place stress on the economic conditions of a family and this too results in absenteeism.

For rural schools, there is often a drop in attendance owing to seasonal changes. For instance, boys are expected to farm alongside their parents during harvest season. In Ghana and Nigeria, we found that it is quite common for boys and girls alike to support their families in farming, and this often results in children either missing school entirely or being fatigued by the time they get to school. For girls, who often do both unpaid work at home as well as on the farm, the combined responsibilities were regularly cited as a common reason for why many of them either missing school or arriving late.

Other barriers

In Nigeria, other barriers to attendance in Table 37 include the lack of support to stay in school from children's family/community, inadequate school-level facilities (e.g. water, separate toilets for boys and girls, and overcrowded classrooms), and the lack of female teachers. These all tend to disproportionately affect girls, with inadequate facilities (such as toilets) having greater effects as girls reach puberty and expect increased privacy. Indeed, we find that girls that attend schools where school-level facilities are inadequate and there are no female teachers have lower attendance. The latter was also observed to affect attendance rates in Ghana.

In Kenya, one factor that hinders children from attending school is health reasons (both the child's and family members'). Students and teachers in Kenya reported that students miss school when either they or someone else in the family is unwell, a duty which often falls disproportionately on girls. Similar issues were raised by girls in their diaries. According to the diaries, when someone in the family is unwell, domestic chores become fully the responsibilities of the girl child. This can affect attendance and/or leave the child feeling very tired.

Other barriers reported in the qualitative interviews include **hunger and menstruation, which were mentioned in Ghana and Kenya** – something in line with the relevant literature.¹⁷³ In Ghana, menstruation was one of the important factors influencing not only if girls were attending school but also if they were able to participate in class. Schools reported that girls miss school if they do not have underwear and sanitary napkins or the school does not have the requisite facilities. Several schools visited in Kenya have tried to stock extra underwear and sanitary towels, as girls may not have the money to buy such items. Occasionally, however, schools lack the resources to provide these for everyone or the girl child avoids going to school altogether. With regards to hunger, we find that when students do not have enough to eat, they feel weak and this impairs their ability to continue with their daily tasks, including coming to school, especially if a meal is also not being served at school. Teachers shared how a student who looks ‘ill’ in the morning may be feeling better after they have had their meal and tea.

Table 36: Attendance breakdown by girls’ characteristics

	Nigeria (%)	Kenya (%)	Ghana (%)
Single orphan	80	95.5	90.8
Living without both parents	84.8	95.7	91.8
Living in female-headed household	86.8	95.6	92.2
Difficult to afford for girl to go to school	81.1	95.9	91.3
Household does not own land for themselves	83.3	95.5	
Poverty rate (based on poverty line of \$1.90 / day)	76.5	95.7	89.3
LOI is different from mother tongue	86.6	95.8	91.7
Girl does not speak the LOI	-	96.4	90.1
Head of household has no education	77	96	90.9
Primary caregiver has no education	78.3	96	91.3
Rural location ^a	75.5	-	-
Living with one parent only	79.9	95.5	90.1

Source: Baseline household survey 2018

Notes: Data is only reported for indicators that have ≥ 60 observations.

^a Rural or urban location was based on the location of the school the cohort girl attends. Data for Kenya and Ghana were not available and thus are not reported in the table.

Table 37: Attendance breakdown by potential barrier

	Nigeria (%)	Kenya (%)	Ghana (%)
Home / community level			
Safety and distance			
Fairly or very unsafe travel to schools in the area (caregiver report)	-	95.7	89.9
Doesn't feel safe travelling to/from school (girl report)	81.6	95.1	89.3

¹⁷³ Pells, K. (2011) 'Poverty and gender inequalities: evidence from Young Lives'. *Young Lives Policy Brief 13*.

	Nigeria (%)	Kenya (%)	Ghana (%)
Closest primary school is further than a 30-minute walk away	83.6	95	92.8
Closest secondary school is further than a 30-minute walk away	77.8	96	91.5
Parental/caregiver support			
High chore burden (spends a quarter of the day / a few hours or more on chores)	79.9	95.9	91.7
Helps with agricultural work, family business, or work outside the home	78	95.8	91.3
School level			
Safety at school			
Doesn't feel safe at school	81.1	95.4	89.9
School facilities			
PTR over 40	76.6	96.5	92.1
School has no female teachers	73.5	95.9	86.2
School does not have access to water	73.5	95.4	92.1
School does not have access to electricity	74.1	95.6	90.2
School does not have separate toilets for girls	77.3	0.0	91.7

Source: Baseline school and household survey 2018

Notes: Data is only reported for indicators that have ≥ 60 observations.

Qualitative assessment of potential DP project effects on attendance

In what follows we present the baseline perceptions of respondents regarding the potential contributions of DP to improving attendance. The evaluation of DP-1 indicated an impact of the DP-1 on attendance in Kenya and Nigeria, but not in Ghana. Given that this is a baseline round of research for DP-2 these findings should be treated as indications of potential impact of DP-2 on attendance, which will be robustly estimated during the midline and endline rounds of research.

Nigeria

The use of audio-video technology was viewed as a key contributing factor for increased attendance in all of the schools visited by the qualitative team. Teachers indicated that pupils attend school in anticipation of watching videos in the learning centre, while parents concur with teachers that children look forward to attending school as a result of the use of videos during the lesson. There is a sense among teachers that pupils would be 'missing out' by not attending school as there is an opportunity to learn and engage from the DP videos. Pupils are 'excited' to watch the videos as the content increases their interest in learning and thus their willingness to attend school. It is worth noting, however, that, while teachers attributed increased attendance to the use of videos, the girls and boys interviewed did not give any account of having watched videos at school.

Community engagement in the form of support or partnerships between the community and the schools as well as community leaders' efforts to encourage parents to send their children to school were stated to have contributed to the increase in attendance in all schools. A joint effort between the PTA and CAP committee has played a role in addressing non-attendance. At the community

level, all individuals involved in CAP activities interviewed mentioned that addressing concerns around attendance is central to their plans. One example of measures taken by the CAP to tackle attendance issues is members paying visits to households or making calls to investigate why the child was not in school.

Kenya

There was no particularly strong suggestion about the effect of DP on children's attendance in Kenya. Instead, teachers said they appreciated the videos as teaching aids to increase children's interest. Teachers reported that they could not arrange for children to take field visits, and felt that their students would otherwise not get exposure to some of these concepts without the videos. However, in the diaries maintained by students in all five counties only in Kajiado did we find an explicit mention of children watching videos during their lessons. In some schools, students were sitting for their exams and so it is likely that teachers may not have used video lessons during the day. While students in other schools did not mention the videos, they spoke about receiving books during class and specifically wrote about enjoying their English and mathematics classes or being taught well or praised in class.

In addition, teachers in Kenya reported that they have learned how to use gender-sensitive teaching methods such as grouping boys and girls together, making sure girls and boys have an equal chance to participate in class, and using examples from both boys and girls in the classroom and of male and female figures for students to aspire to. Teachers also find DP materials have helped students visualise what they are teaching better, making the topics relatable and making their work more manageable in the classroom.

Ghana

With regards to DP's influence on attendance in Ghana, a few different schools mentioned that they saw some improvement in attendance rates. A common reason cited was the use of videos in the lesson, as this method was more attractive to children and made learning fun. However, this sort of response usually came from teachers, the head teacher, or individuals involved in CAP activities, who were more familiar with the project. Some parents did speak about video lessons in school, and they also discussed how the visual evidence helped their children learn about new animals and places and that they came home and shared their experiences with them. Some parents also mentioned extra classes being organised that were attended by their children, which they thought were an encouraging step and something they tried to get their children involved in.

Most of the teachers and head teachers were appreciative of the teaching aids received as part of the DP project (such as the videos), which they believe have helped to make teaching much more interactive and engaging for the children. Another key thing they mentioned was that these videos make it easier for children to comprehend and remember new words and objects that earlier seemed quite abstract. For example, in one school the teachers spoke about how they previously had challenges with teaching practical topics (for example, lessons on wildlife) because they only know the names of some animals but, in reality, had not seen them before. However, with the use of visual learning techniques, they themselves were learning more about animals. Further, a few schools also mentioned that these tools were motivating children to speak English because some children in the videos they watch speak in English.

DP in the wider context

As discussed in Chapter 1 (as well as in more detail in Annex 17), DP-2 does not function in isolation in the three countries: it is operating alongside other education programmes that may have a similar impact on attendance. The school feeding scheme, for instance, has an impact on attendance in Kano State in Nigeria and in Kenya. In a marginalised community where parents are not able to provide for their children, the provision of meals at school becomes a source of motivation to attend school. Moreover, the provision of cash transfers and financial support stand out as additional reasons for increased attendance in Kenya. In such a context, the particular contribution of DP-2 to the improved attendance, if any, will be further assessed in the subsequent rounds of data collection and evaluation.

Quality of attendance data

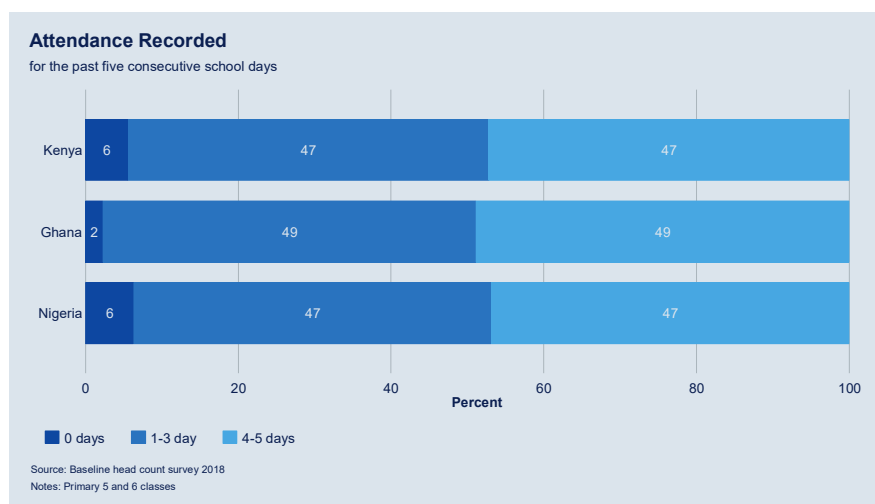
Attendance-keeping practices represent a major concern that emerged during DP-1. Therefore, building on the experiences from DP-1, the attendance indicator for this evaluation focused on data at the cohort level rather than the class level to minimise issues around incompleteness of attendance records. As part of the attendance spot checks and cohort attendance data gathering exercise, we observed school records for the current and previous academic year for each school across the three countries (if records were available). Our review finds that there are serious concerns about the validity of this indicator for Nigeria, and a few concerns in Kenya based on the data gathered at baseline. We discuss this briefly below.

We found that most schools had attendance records available for each girl – in Kenya 87%, in Ghana 98%, and 91% in Nigeria had records for the cohort girls. Of those girls, where the attendance record was not available this was mainly due to the schools not having a register or the registers not being available at the time of the visit (7% in Nigeria, 10% in Kenya, and 1% in Ghana). A few of the cases (2% in Nigeria, 3% in Kenya, and 1% in Ghana) were due to the girl not having enrolled in the specific school in the previous term. Teachers on average did not record attendance for 15.6% of the term in Nigeria (average: nine days per term), 3% of the term in Kenya (average: two days per term), and less than 1% of the term in Ghana. The incompleteness of the attendance records for some of the girls, particularly in Nigeria and to a lesser extent Kenya, indicates that there are issues surrounding the validity and accuracy of the attendance data.

To further support this concern, during the attendance spot checks conducted in primary 5 and 6 levels, we also looked at class attendance registers and reported on the number of days the teacher recorded attendance in the past five consecutive school days – see Figure 36.¹⁷⁴ Across the three countries, more than half the teachers in both primary 5 and 6 had only recorded attendance for three or fewer days out of the five past school days. Roughly the same portion of teachers had recorded attendance for about four or five days.

¹⁷⁴ In Ghana and Nigeria, since JSS are not located within primary schools, headcount was only conducted in primary 5 and 6. In Kenya, headcount was conducted in primary 5, 6, and 7.

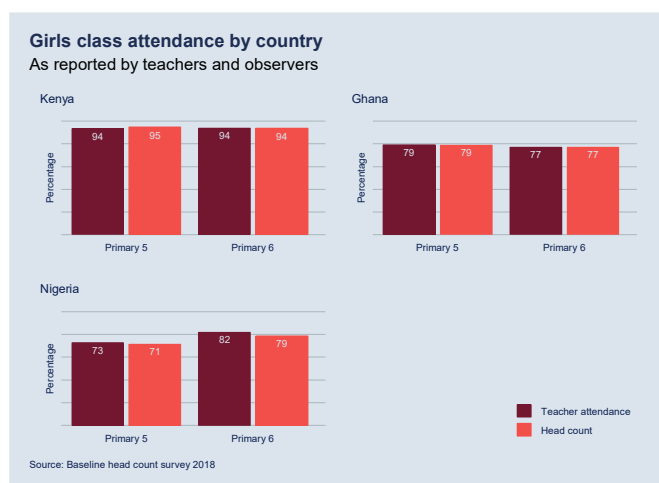
Figure 36: Attendance recorded in the past five consecutive school days in primary 5 and 6



We also looked at class-level attendance for the day of the visit as recorded by the teacher and undertook a physical headcount to verify what was recorded by the teacher – see Figure 37. In Kenya and Ghana, girls’ attendance taken by the teacher was aligned with the headcount conducted, for the most part. In Nigeria, however, we find slight differences in terms of higher attendance rates being reported by teachers in comparison with the headcount.

Overall, attendance-keeping practices seem to be relatively good in Ghana and somewhat good in Kenya, but there are irregularities in the teachers taking attendance on a daily basis. However, there are major concerns in Nigeria overall. Therefore, we would suggest applying some caution in the interpretation of the baseline attendance levels. In light of these concerns, and the fact that attendance is a key intermediate outcome indicator for the project, we would strongly encourage the DP country teams to work closely with schools through their monitoring visits to encourage and monitor attendance-keeping practices, particularly in Nigeria.

Figure 37: Girls’ class attendance by primary level and country



Summary

Overall, we found that the attendance rates are relatively high in all three countries. This suggests that most marginalised households send their children to school regardless of the barriers they face. There are of course instances when children are late, absent, and sent home for not paying school fees on time. The reasons that affect a child's attendance in school are complex and deeply dependent on the nature of their marginalisation. Those households who suffer from multiple drivers of marginalisation (poverty or extreme poverty, children's participation in paid and unpaid work, single-parent families, adopted children, etc., as discussed in the previous chapter) tend to face multiple barriers to their children's participation at school (distance to school, menstruation and lack of resources, pregnancy and marriage, floods and droughts, caring for family members, etc.). They are therefore at most risk of failing. The findings presented show some examples of schools and community efforts in supporting children, through organising remedial classes, community leaders alleviating some financial stress by supporting schools with purchasing certain consumables, and contributing financially. However, these measures are unlikely to create a long-term solution for the students or the school.

The biggest constraint in school attendance is poverty for all households across all countries.

Although we have not found strong evidence that poverty affects girls' attendance more than boys' we found that Ghanaian girls are reported to do paid and unpaid work more than boys while boys in Kenya tend to be away from school for a longer time due to the nature of the work in which they are involved. The barriers to girls' education that are often discussed in the literature such as FGM and community attitudes do not seem to be reported in the cases of the three countries. In fact, the barriers to schooling were less related to community attitudes and more intertwined with financial constraints such as the ability to buy school supplies, a necessity to do paid and unpaid work to improve family well-being, or specific seasonal environmental factors that prevent children from attending school regularly. Communities and parents generally reported a positive attitude toward educating their daughters and said that better schooling meant more opportunities for them to succeed in their lives and become financially independent.

The attendance rates at baseline are very encouraging. For Kenya and Ghana, given the high baseline levels (over 90%) we would recommend that the DP-2 maintain these levels throughout the period of the evaluation. For Nigeria, taking into account the results from DP-1, we advise taking a conservative approach and recommend that the project increase attendance by one percentage point at midline and an additional one percentage point at endline.

5.2 Quality of teaching

DP-2 assumes that pupils (girls in particular) learn better when they are taught by effective teachers and that teachers become more skilled and knowledgeable through training. Teacher training constitutes a core component of project activity, with a focus on improving teachers' performance, the quality of teaching, and ultimately learning outcomes. In all schools visited, a primary 5 numeracy or literacy teacher was randomly selected to have their lesson observed. It should be noted that we did not require that the teacher had been exposed to training provided under DP-1. This reflects the reality of teacher turnover, meaning that not all schools would have a primary 5 numeracy or literacy teacher who had been trained under the previous phase of the programme.

According to the literature,¹⁷⁵ quality of teaching can be conceptualised as both teacher characteristics such as inputs (professional qualifications, experience, place of residence, in-service training etc.) as well as what the teachers ‘do’ in the classroom (practices, attitudes, and content knowledge). Teaching quality is claimed to be one of the most important factors contributing to student achievement, and is even more significant than class size.¹⁷⁶ However, little is known about what exactly it is about teachers and teaching quality that accounts for this contribution.¹⁷⁷ The subsequent sub-sections will discuss each of the two dimensions of quality of teaching in turn, starting with the quantitative and finishing with the qualitative findings. Both the quantitative and qualitative work largely focus on what the teachers ‘do’ dimension of teaching, but the qualitative findings will also shed some light on who these teachers are, their perceptions of DP-2 training modules, and the ways they benefited from them.

5.2.1 Lesson observations

Aims of lesson observation instrument

The lesson observation aims to address two questions by the midline and endline rounds of research:

1. Are there changes in gender-responsive, student-centred, interactive pedagogy and the use of video/media in the classroom to which project training and support have contributed, and in what ways?
2. Are there changes in teacher effectiveness to which training and support in strategies for addressing literacy and numeracy have contributed and in what ways?

At baseline, the aim is to provide a picture of the classroom practices in treatment and control schools. This enables changes over time to be identified.

Lesson observations are only able to provide a snapshot of what happens in a classroom. It is impossible to objectively state from an observation how a lesson could or should be approved. The lesson observation instrument does not provide indicators that translate directly to value statements. For example, although the aim is to encourage more use of student-centred and active learning methods like group work, it may not be desirable to observe group work in 100% of the lessons observed. Rather, it seeks to provide evidence of which methods are used and how well. This enables comparison between treatment and control lessons over time so that any changes and differences can be identified.

To that end, this section includes information about the lessons observed (e.g. what was taught, which approaches and methods were employed, etc.) and how effective teachers were at engaging pupils.

In general, the information described demonstrates that:

- There were few significant differences between treatment and control schools:
 - In Kenya, treatment schools were more likely to have learning materials on the wall and provide a safe and supportive space;
 - In Kenya, teachers in treatment schools were more likely to be judged to have given attention to pupils equally;

¹⁷⁵ Singh, R. and Sarkar, S. (2015) ‘Does teaching quality matter? Students Learning Outcome Related to Teaching Quality in Public and Private Primary Schools in India’, *International Journal of Educational Development* 41: 153–163.

¹⁷⁶ Darling-Hammond (2000), cited in Ibid.

¹⁷⁷ Rockoff (2004) and Rivkin *et al.* (2005), cited in Ibid.

- In Ghana, students' work was displayed on walls more often in treatment schools than in control schools;
 - In Kenya, teachers in treatment schools were more likely to check pupils' understanding during literacy lessons; and
 - In Nigeria, teachers in treatment schools used closed- and open-ended questions more frequently than those in control schools.
- There are no teaching and learning materials or pupils' work on the walls of classrooms, but they are safe and inclusive spaces.
 - Girls and boys tend to receive equal attention and support from teachers.
 - Classrooms are quiet and orderly, but pupils report the use of corporal punishment.
 - Lessons are interactive, but within a front-led paradigm – largely through question and answer sessions or demonstrations on the blackboard.
 - Teachers often ask both closed- and open-ended questions, give time for pupils to think about the answer, and repeat or rephrase where necessary.
 - Checking pupils' understanding is quite common in Kenya, but quite rare in Nigeria (Ghana sits between the two).
 - The teaching methods that DP will focus on in training are used rarely at present.

Lessons observed

Enumerators observed 115, 115, and 113 lessons in Kenya, Nigeria, and Ghana respectively. Table 38 shows the characteristics of the lessons that were observed.

Table 38: Lesson characteristics

	Kenya		Nigeria		Ghana	
	Control	Treatment	Control	Treatment	Control	Treatment
Number of lessons	59	56	56	59	55	58
Of which, English	38%	52%	65%	41%	33%	36%
Of which, mathematics	62%	48%	35%	59%	67%	64%
Average class size	42	44	35	37	35	38

Teacher training

It is important to note the background to the intervention being evaluated. Of particular importance is what training the teachers who were observed have received prior to this baseline survey. Table 39 shows the percentage of teachers who had received training on different topics within the past three years (for control and treatment schools).

Table 39: Training received by teachers in control and treatment schools in the previous three years (self-reported)

	Kenya	Nigeria	Ghana
Control schools			
Numeracy teaching methods	32%	73%	41%
Literacy teaching methods	36%	77%	35%
Use of technology within the classroom	25%	23%	16%
Gender-sensitive teaching methods	22%	29%	10%
Life skills training	30%	15%	4%
Other	17%	18%	10%
Special education	5%	12%	8%
Minority language teaching methods	3%	0%	16%
Treatment schools			
Numeracy training	32%	83%	38%
Literacy training	59%	79%	86%
Use of video in the classroom	61%	75%	74%
Gender training	27%	74%	41%
Community workshop I and II	23%	71%	38%
Team coaching workshop	20%	46%	32%
Management and sustainability workshop I and II	20%	45%	32%
Practice sharing workshop	13%	29%	17%

In control schools, subject-specific pedagogy was most common, particularly in Nigeria. About a quarter of teachers in Kenya and Nigeria had also received training on the use of technology and gender-sensitive teaching. In Ghana, much fewer had received this kind of training (16% and 10%, respectively).

In treatment schools, it appears that many teachers have already benefited from the previous DP training. This is particularly the case in Nigeria, where DP-2 numeracy training had occurred prior to the baseline, for example.

'Video in the Classroom' is DLA's foundational training and, while it includes a focus on technology and the effective use of videos, it also covers a range of good teaching practices around active, student-centred pedagogy. This is the one teacher training for which DP was trying to reach all teachers in project schools, so this works as a rough measure of teacher attrition since 2014/15, suggesting that Kenya suffers from the highest rates of teacher turnover.

DP-1 also included gender training so it is surprising that the proportion of teachers reporting having received training in this area was similar in treatment and control schools in Kenya. The cause is not clear, but may be a result of suspect self-reporting from teachers and transfers out of the targeted schools.

Table 40, presents the DP trainings received by teachers via direct or step-down in the past three years. The majority of training reported by the samples teachers was delivered directly. Step down training constituted only 16 percent of courses in Kenya, 11 percent in Nigeria and four percent in Ghana. Step

down training was most commonly used to teach the use of video, gender training, management and sustainability and team coaching (constituting 14 to 18 percent of courses tired during the survey).

Table 40: Training received by teachers in treatment schools in the previous 3 years, by direct and step-down (self-reported)

Training	Kenya		Nigeria		Ghana	
	Direct	Step Down	Direct	Step Down	Direct	Step Down
Use of videos in the classroom	27	7	34	8	37	6
	79%	21%	81%	19%	86%	14%
Gender training	12	3	35	7	23	1
	80%	20%	83%	17%	96%	4%
Community workshop I and II	11	2	37	3	22	0
	85%	15%	93%	8%	100%	0%
Management and sustainability workshop I and II	9	2	20	5	18	1
	82%	18%	80%	20%	95%	5%
Team coaching workshop	8	3	23	3	18	1
	73%	27%	88%	12%	95%	5%
Numeracy training	16	2	47	2	23	0
	89%	11%	96%	4%	100%	0%
Literacy training	30	0	40	0	50	0
	100%	0%	100%	0%	100%	0%
Practice sharing workshop	4	3	13	3	10	0
	57%	43%	81%	19%	100%	0%

Lesson structure

The lesson structure describes, in broad terms, the elements of the observed lessons.

Table 41: Lesson structure – the percentage of lessons that contained each category

	Kenya		Nigeria		Ghana	
	Control	Treatment	Control	Treatment	Control	Treatment
Whole-class teaching: pupils listen	89%	70%	47%	71%	86%	66%
Whole-class teaching: question and answer	81%	86%	79%	73%	52%	59%
Pupils working individually	51%	45%	17%	22%	54%	36%
Pupils working in pairs or groups	6%	13%	5%	20%	14%	10%
Whole-class teaching: using video or other resource	4%	5%	15%	36%	3%	24%
Other	0%	0%	0%	2%	0%	0%

Source: Lesson observation survey, Kenya, Nigeria, and Ghana 2018. Question: What is the structure of the lesson? Can select multiple categories.

Table 41 (above) shows that, when students are active, it is mostly through question and answer sessions and individual work. Pair or group work was rare, though more evident in treatment school classrooms in Kenya and Nigeria. Only a few lessons in Nigeria and Ghana (and no lessons in Kenya) included the use of video (most recorded as ‘video or other resources’ were classified as such because of the use of ‘other resources’).

The low proportion of lessons that included whole-class teaching with pupils listening in control schools in Nigeria is strange and unexpected. This may be caused by enumerator error.

Free text descriptions of ‘*whole-class teaching: pupils listen*’ showed that often this included some initial instructions. Lecturing and exposition were particularly common in Nigeria and Ghana, while demonstration was more common in Kenya. For example, teachers might demonstrate how to answer multiplication sums, convert metres to kilometres, or identify silent letters. In some cases, the observers describe pupils repeating the answers in chorus. In others, the teacher would read the text and the pupils would repeat it back.

‘*Whole-class teaching: question and answer*’ included examples of teachers asking students to solve maths sums, make sentences using new vocabulary, and answer comprehension questions on a text they had read. In some cases, pupils would demonstrate how to answer a maths sum or punctuate a sentence on the board. In a few cases in Kenya, the questions opened up discussions a little more. For example, teachers asked about experiences visiting cities or what the effects of drought are. However, questions seem to mostly focus on solving maths sums, grammar, and vocabulary.

Individual work (copying text and answering maths or comprehension questions) and they worked in pairs or groups in around 10%.

Most of the *use of video and other resources* consisted of teachers using flash cards, charts, and improvised materials. Seven lessons in Ghana and two lessons in Nigeria used video. None did in Kenya.

In order to ascertain whether there are correlations between the teacher or class characteristics and the likelihood that a lesson contains any element, we run probit regressions. We specify models to have one independent variable at a time. This showed the following relationships:

- Treatment/control
 - *Whole-class teaching with pupils listening to the teacher* was significantly more common in control lessons than in treatment lessons in Kenya and Ghana.¹⁷⁸ This is what we would expect to observe given the previous engagement with treatment schools about student-centred learning.
 - Conversely, and more surprisingly, whole-class teaching of this nature was more common in treatment lessons than control lessons in Nigeria.¹⁷⁹
 - *Pupils working in pairs or groups* was more common in treatment schools than control schools in Nigeria and Kenya. Although neither relationship was statistically significant (due, in part, to their relative rarity), in Nigeria it was very close with a P-value of 0.103. In Ghana, there was a weak non-significant relationship in the other direction.
 - *Whole-class teaching using video or other resources* was more common in treatment lessons than control lessons in Nigeria and Ghana.¹⁸⁰ Again, this may relate to a previous engagement with the project.
- Subject differences:
 - In Kenya, students were more likely to *work collaboratively* in pairs or groups during English lessons than during mathematics lessons.¹⁸¹
 - In Nigeria, students were more likely to *work individually* during mathematics lessons than during English lessons.¹⁸²

5.2.2 Classroom management

Student-centred, interactive pedagogy cannot be practised if the class environment is not safe, welcoming, and supportive for all students. It is therefore important to observe how well teachers manage the classroom environment and how they interact with students.

Gender-sensitivity is also a factor here. It is important that girls and boys are included and supported equally.

Observers, therefore, answered three questions for both maths and English lessons. They scored each lesson on a scale of 0–2 for each question, where 0 indicates that the condition was not met, 1 indicates that it was met, and 2 indicates that it was met to a high standard. More information about the descriptions for each score is provided in Annex 23. The three conditions are:

- The teacher does not allow any group or individual to disrupt other pupils' learning.
- The teacher gives attention and support to pupils equally.
- The teacher maintains a calm and supportive atmosphere.

Figure 38, Figure 39, and Figure 40 show that, on the whole, class management is good with only about 6% scoring a 0 for each indicator for in all three countries.

¹⁷⁸ P-value = 0.01 in Kenya and 0.05 in Ghana.

¹⁷⁹ P-value = 0.09.

¹⁸⁰ P-value = 0.08 in Nigeria and 0.01 in Ghana.

¹⁸¹ P-value = 0.05.

¹⁸² P-value = 0.06.

Figure 38: Kenya - Classroom management in all schools

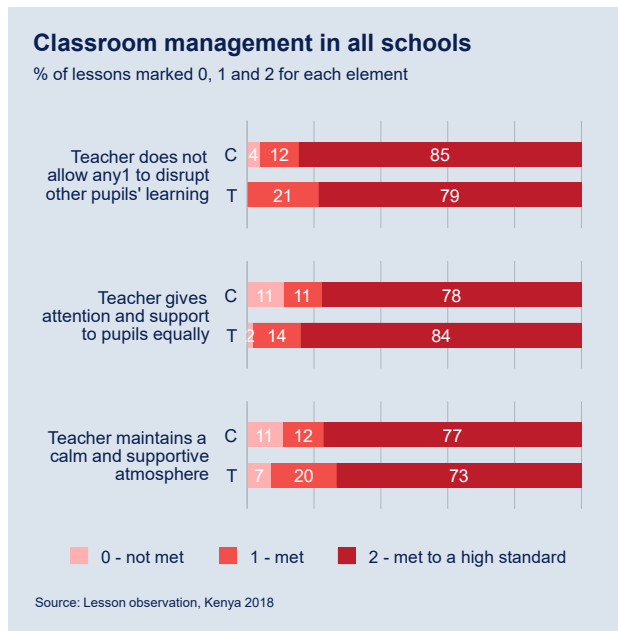


Figure 39: Nigeria - Classroom management in all schools

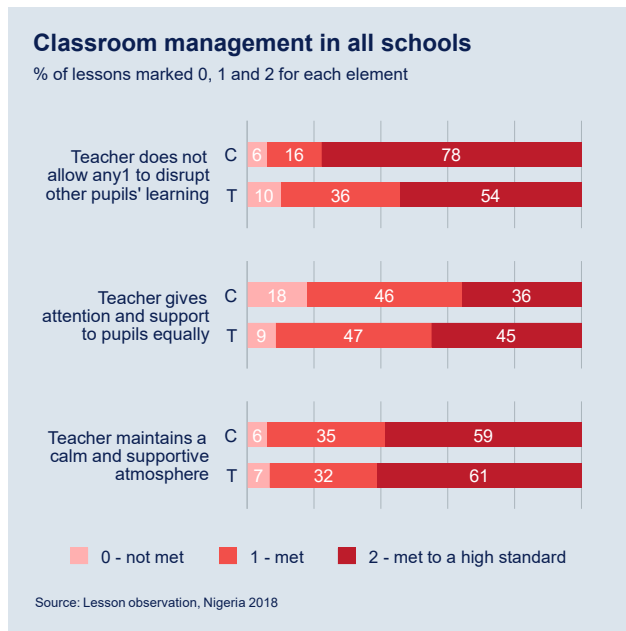
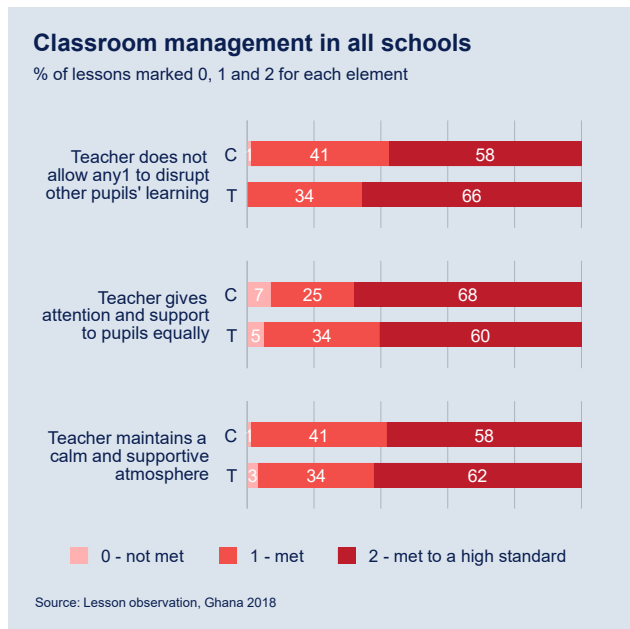


Figure 40: Ghana - Classroom management in all schools



Descriptions of the 'disruption' indicator

The two lessons that scored '0' for disruption were described as noisy and dominated by talk that was not relevant to the lesson. Teachers did little or nothing to address the issue.

For most lessons that scored '1', the reasoning was that there was some disruption (shouting out, walking around, talking) but the teacher addressed it. In some cases, disruption was only among a few pupils, and the teacher did not notice or address it. In some cases in Kenya (approximately 20%), lessons were marked down because of the way that pupils sought to get the attention of the teacher to answer a question was a little loud or disorderly. However, disruption of this kind is likely to be less harmful to learning than the other forms described.

For lessons that scored '2', enumerators described pupils and teachers interacting in a calm and orderly manner, pupils being focused, and potential disruptions being 'dealt with' quickly. The words 'silence', 'quiet', and 'orderly' (or words to that effect) were common in descriptions.

Descriptions of the 'attention' indicator

Observers assigning lessons a score of '0' mostly described the teacher treating the pupils as a single group with responses only given in chorus or paying attention to only a small group (often those who respond).

In Kenya and Nigeria, gender imbalances were observed in a few lessons. The number of lessons where boys were favoured was fairly similar to the number in which girls were favoured.

For the lessons that had a score of '1', at least a few different pupils were engaged. Various inequalities were identified. Gender was the most common and was normally in favour of boys (in one case because they responded quickest), although in a few cases girls were favoured. There were also spatial disparities in a few cases with those at the front receiving all of the attention.

For the lessons assigned a score of '2', the teachers selected pupils of both genders and from all parts of the room. In Kenya, the observers describe teachers moving around the room so that they could better achieve this.

Descriptions of the 'atmosphere' indicator

The observations for lessons assigned a '0' spoke of noise, domination by a few students, and lack of praise for any pupils.

For lessons marked as a '1', most described calm atmospheres, with a few commenting on teachers praising the pupils. The distinction between a '1' and a '2' was often the level of support provided by the teacher.

For the lessons that were scored as a '2', the majority of comments highlighted encouragement or praise of pupils. Some identified how the teacher would support those who could not answer a question correctly or encourage reluctant pupils to try. In a significant minority of cases, observers only commented on a calm and orderly environment, but in some they described it as 'friendly'.

Correlations with other factors

Again, we used probit regressions (one independent variable at a time) to identify correlations between these measures and other factors. Probit regression works on binary dependent variables (0 or 1), so we had two dependent variables for each indicator: one to distinguish those that scored 1 or more from those that score 0 and the other to distinguish those that scored 2 from those that scored 1 or less.

These identified the following correlations:

- Treatment/control
 - In Kenya, teachers in treatment schools were significantly more likely to be judged to have given *attention* to pupils equally than those in control schools.¹⁸³
 - In Nigeria, *disruption* was more of an issue in treatment schools than in control schools.¹⁸⁴
- Subject differences
 - In Nigeria, teachers of maths lessons were more likely to *give attention and support evenly* than teachers of English lessons.¹⁸⁵ However, the reverse was true in Ghana.¹⁸⁶
- Class size differences:
 - In Nigeria, pupil *disruption* was more likely to be an issue in larger classes.¹⁸⁷
 - Similarly, the *atmosphere* in larger classes was less likely to be calm and supportive.¹⁸⁸
- Teacher characteristics:
 - In Nigeria and Kenya, better-qualified teachers appeared better able to prevent pupil *disruption*.¹⁸⁹
 - In Kenya, teachers with a PTE, diploma, or bachelor's degree were more likely to score a '2' for giving *attention* to pupils equally compared with those with only a secondary-level education.¹⁹⁰
 - In Kenya, more experienced teachers and teachers with a bachelor's degree were more likely to create a calm and supportive *atmosphere*.¹⁹¹ This does not explain the difference between treatment schools and control school since teachers in treatment schools were not better qualified than their comparators in control schools.
 - In Nigeria, better-qualified teachers were more likely to maintain a calm and supportive *atmosphere*.¹⁹²

¹⁸³ P-value = 0.06. Dependent variable: 1 if score was 1 or 2; 0 if score was 0.

¹⁸⁴ P-value = 0.05. Dependent variable: 1 if score was 2; 0 if score was 0 or 1.

¹⁸⁵ P-value = 0.08. Dependent variable: 1 if score was 2; 0 if score was 0 or 1.

¹⁸⁶ P-value = 0.01. Dependent variable: 1 if score was 1 or 2; 0 if score was 0.

¹⁸⁷ P-values of 0.01 – 0.03 with scores being lower the larger classes get.

¹⁸⁸ P-values of 0.04 – 0.06 with scores being lower the larger classes get.

¹⁸⁹ P-values of 0.01 and 0.04 in Nigeria. Dependent variable: 1 if score was 1 or 2; 0 if score was 0.

P-values of 0.02 and 0.05 in Ghana. Dependent variable: 1 if score was 2; 0 if score was 0 or 1.

¹⁹⁰ P-value = 0.01-0.03. Dependent variable: 1 if score was 2; 0 if score was 0 or 1.

¹⁹¹ P-value = 0.01 for bachelor's degree. P-value = 0.01 and 0.03 for 6–10 years' experience and 16–20 years' experience respectively (11–15 years not statistically significant). Dependent variable: 1 if score was 2; 0 if score was 0 or 1.

¹⁹² P-values of 0.01 and 0.03. Dependent variable: 1 if score was 1 or 2; 0 if score was 0.

Summary

- Very few lessons were graded '0' for any of the three classroom management indicators. Disruption from pupils is limited, teachers give attention and support fairly evenly, and the atmosphere in classrooms is mostly calm and supportive.
- There were some differences between treatment and control lessons, but these vary between countries.
- In general, better-qualified teachers achieved better scores for this domain than less-qualified teachers.

5.2.3 Classroom environment

We wanted to assess whether the classroom environment supports the teaching and learning of numeracy or literacy for all students equally, regardless of the gender or other characteristics of students. Observers scored lessons according to the following three criteria:

- There are displays of work produced by both girls and boys that show and celebrate their skills and achievements in numeracy (literacy).
- There is material (visual aids) on display to aid the development of pupils' mathematical vocabulary and support mathematical thinking and communication (to support teaching and learning literacy).
- The classroom environment offers a safe, supportive, and socially inclusive space for all pupils irrespective of gender, ability, socioeconomic, or cultural background.

Again, observers used a three-point scale from 0 to 2 with 0 indicating that the condition was not met and 2 indicating that it was met to a high standard. Full details, including the definition of a safe space and social inclusion, can be found in Annex 23.

Figure 41, Figure 42, and Figure 43 demonstrate that very few classrooms had any work displayed and the majority did not have any materials on display. On the other hand, most classrooms (79%) do offer a safe and socially inclusive space. Compared with the other two countries, a larger proportion of lessons in Ghana were rated as 1 instead of 2 for providing a safe space. It is not clear whether this reflects real differences within the classroom or differences between the observers.

Figure 41: Kenya – classroom environment

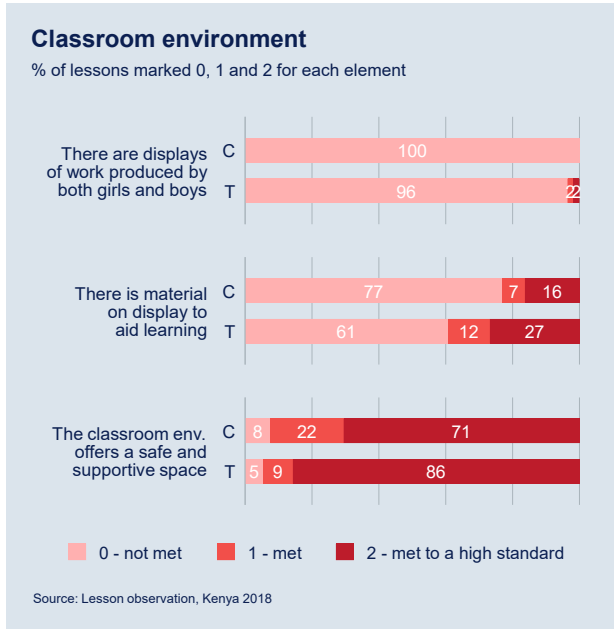


Figure 42: Nigeria – classroom environment

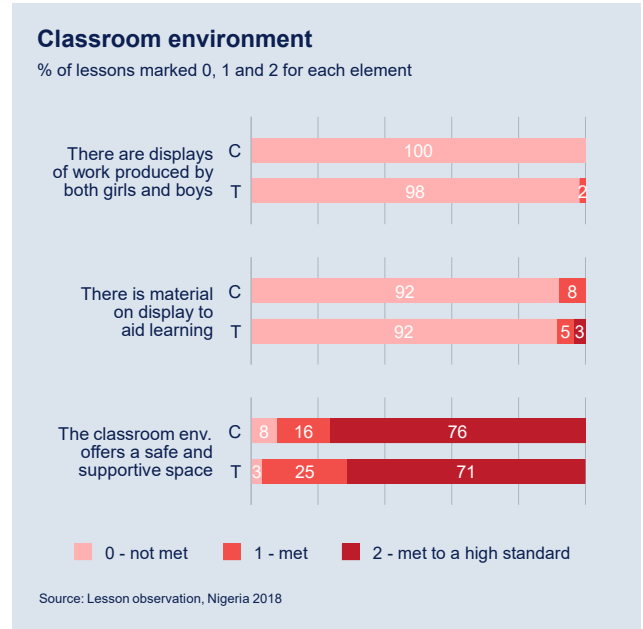
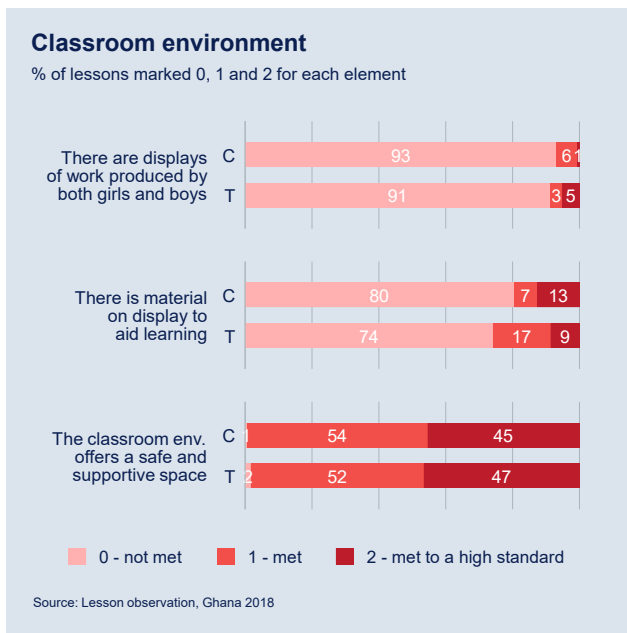


Figure 43: Ghana – classroom environment



Enumerator comments on the classroom environment

The descriptions for *materials* show that, in all cases, the materials are charts and posters of some description. The distinction between the lessons that were graded as '1' and those that were graded as '2' mostly related to the relevance and usefulness of the materials.

Where lessons were assigned a '1' for *safe and supportive space*, observers commented most frequently on the boys being supported more or the apparent timidity of girls to share their thoughts. Although the majority of comments did not mention gender balance and many commented on equal balance, this contradicts the comments made against the *equal attention* indicator. Some observers also commented on the classroom being crowded and uncomfortable.

In contrast, where lessons were assigned a '2' observers commented most frequently on the comfort of all pupils in terms of participating and contributing in class.

Correlations with other factors

There are two factors that appear to be associated with classroom environment:

- Treatment/control
 - In Kenya, treatment schools were more likely to have learning materials displayed on the wall¹⁹³ and to provide a safe and supportive space.¹⁹⁴
 - In Ghana, students' work was displayed on the wall more often in treatment schools than in control schools.¹⁹⁵
- Teacher characteristics
 - In Kenya, teachers with less than three years' experience were less likely to have teaching and learning materials on the wall than more experienced teachers.¹⁹⁶ It is not clear whether this is causative (new teachers do not put resources on their walls) or whether there is another reason for the correlation (such as schools in poorer or more remote communities having more new teachers and fewer resources).

Summary

- Very few classrooms had work displayed on the wall.
- Few classrooms had teaching and learning materials on the walls.
- The classroom environment was generally assessed to be safe and socially inclusive, but there is a little evidence of boys being supported more than girls in some cases.

5.2.4 Assessment strategies

Numeracy

Assessment in the classroom is important to enable teachers to track and respond to pupils' progress. It is a key part of student-centred teaching because it provides the information required for teachers to adjust the pace and content of their lessons to the needs of pupils. Enumerators observed the assessment strategies employed by teachers in mathematics lessons. The strategies are shown in Annex

¹⁹³ P-value = 0.08. Dependent variable: 1 if score was 1 or 2; 0 if score was 0.

¹⁹⁴ P-value = 0.06. Dependent variable: 1 if score was; 0 if score was 0 or 1.

¹⁹⁵ P-value = 0.03. Dependent variable: 1 if score was; 0 if score was 0 or 1.

¹⁹⁶ P-values between 0.01 and 0.06 depending on specification of dependent variable and comparator group (3–5 years, 6–10 years, or 11–15 years).

23. Lessons were scored on a three-point scale from 0 (approach not observed) to 2 (the teacher used the approach effectively).

The scores are shown in Figure 44 for Kenya, Figure 45 for Nigeria, and Figure 46 for Ghana. The figures show that the assessment methods used vary between countries. In Kenya, supportive questioning, checking pupils' knowledge during lessons, and checking pupils' mastery at the end were all fairly common, occurring in 65–70% of lessons. In Nigeria and Ghana, teachers checked pupil knowledge in fewer lessons. They depended more on closed- and open-ended questions and supportive questioning. Quizzes and other strategies were very rare and, based on the accompanying comments, even some of the lessons that were coded as including them may have been miscoded.

Figure 44: Kenya – Numeracy assessment strategies

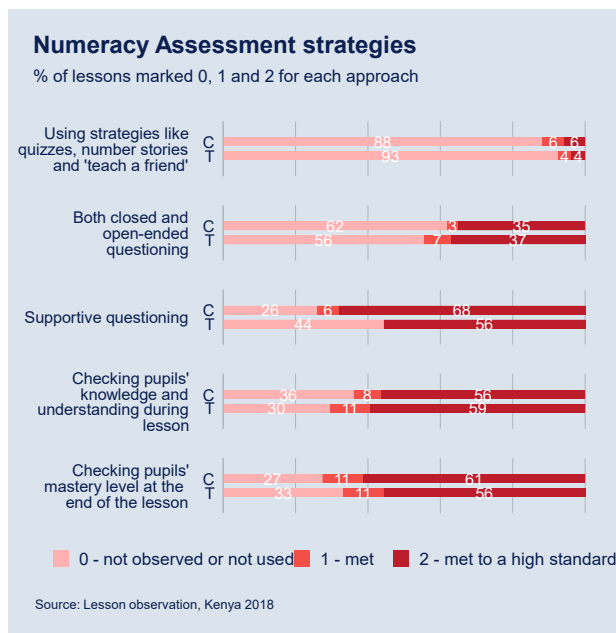


Figure 45: Nigeria – Numeracy assessment strategies

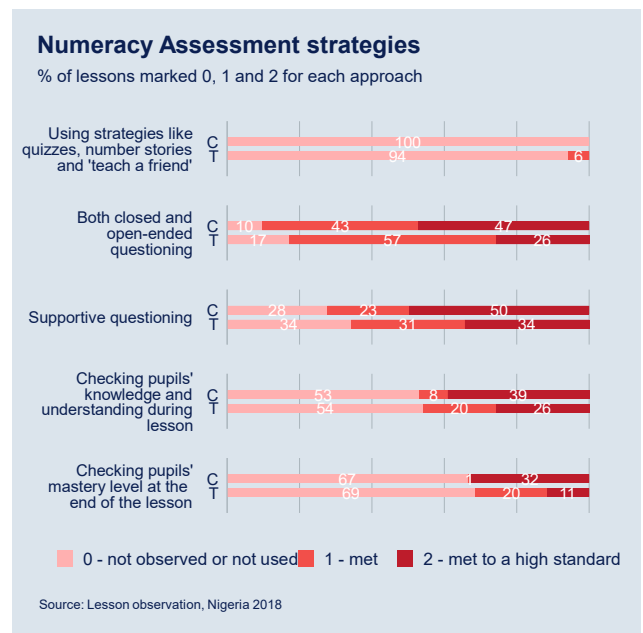
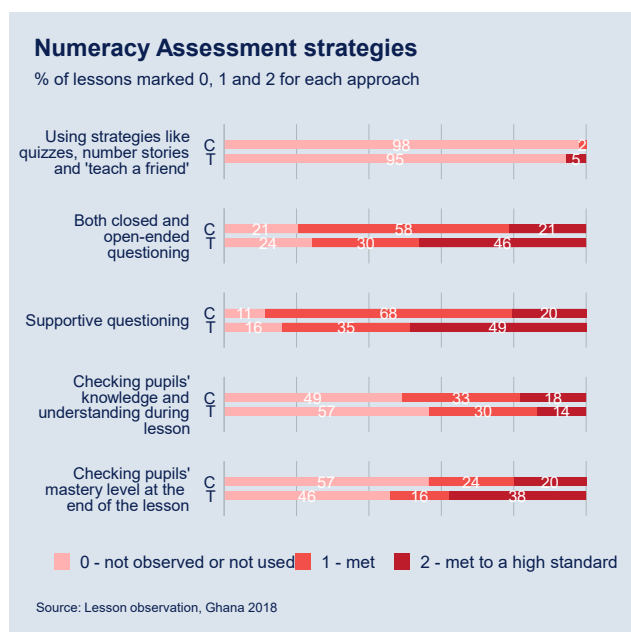


Figure 46: Ghana – Numeracy assessment strategies



Enumerators' comments provide more information about what each assessment strategy looked like. Information from these comments is provided in Annex 23.

Correlations with other factors

The regression analysis identified a few statistically significant correlations:

- Treatment/control:
 - There were no significant differences between the assessment methods used in treatment lessons and those used in control lessons.
 - In Ghana, treatment lessons were more likely to be rated as a '2' for supportive questioning and open- and closed-ended questions.¹⁹⁷
- Kenyan counties:
 - Teachers were more likely to use supportive questioning during the lesson and check for mastery at the end of the lesson in Nairobi than in other counties.¹⁹⁸
- Teachers were less likely to check pupils' mastery at the end of the lesson when they taught *understanding mathematical concepts*.¹⁹⁹
- Teachers were less likely to check pupils' understanding during the lesson when they taught *mathematical communication: vocabulary*.²⁰⁰
- Teachers were less likely to use supportive questioning when they taught *mathematical communication: reasoning and justifying*.²⁰¹

¹⁹⁷ P-value = 0.06 and 0.07 respectively.

¹⁹⁸ P-value = 0.01 and 0.00 respectively.

¹⁹⁹ P-value = 0.01 and 0.04 depending on specification of dependent variable.

²⁰⁰ P-value = 0.09. Dependent variable: 1 if score was 1 or 2; 0 if score was 0.

²⁰¹ P-value = 0.05 and 0.01 depending on specification of dependent variable.

- When teachers taught *procedural fluency*, they were more likely to: (i) check understanding during the lesson; (ii) check mastery at the end of the lesson; and (iii) use supportive questioning.²⁰²

Class size and teacher characteristics may also influence the assessment strategies used:

- In Kenya, there are some correlations between class size and (i) checking understanding during the lesson, (ii) checking mastery at the end of the lesson, and (iii) using supportive questioning. These findings suggest that these strategies are less likely to be used when the class is smaller than 30 pupils. This may be caused by other characteristics of these small classes, rather than the class size itself (e.g. rurality).
- Also in Kenya, better-qualified teachers (those with more than secondary-level education) are more likely to (i) check mastery at the end of the lesson and (ii) use supportive questioning.²⁰³
- In Kenya, teachers who have only been teaching for up to two years were less likely to use supportive questioning.²⁰⁴ In Nigeria, teachers who had been teaching for more than 10 years were more likely to use supportive questioning.²⁰⁵

Summary

- In Kenya, supportive questioning, checking pupils' knowledge during lessons, and checking pupils' mastery at the end were all fairly common, occurring in 65–70% of lessons.
- In Nigeria and Ghana, supportive questioning and closed- and open-ended questions were the most common assessment methods. Checking pupils' understanding during the lesson and mastery at the end occurred in just under half of the lessons observed.
- The assessment strategies used in treatment lessons were similar to those used in control lessons.
- In Kenya, lessons in Nairobi used supportive questioning more often than those in other counties.
- There is some evidence from Kenya that the assessment strategies used are correlated with teacher characteristics and class size.

Literacy

As with numeracy teaching, it is important that teachers assess pupils' skills and understanding so that they can adapt to the pace and needs of students. Enumerators observed the assessment strategies employed by teachers in literacy lessons. These strategies are the same as those for numeracy shown earlier in this section. Figure 47 for Kenya, Figure 48 for Nigeria, and Figure 49 for Ghana show the ratings for each of the assessment strategies.

²⁰² P-value = 0.01 and 0.07 for checking understanding during the lesson. P-value = 0.01 and 0.07 for checking master at the end of the lesson. P-value = 0.08 for supportive questioning. Dependent variable: 1 if score was 2; 0 if score was 0 or 1.

²⁰³ P-values of 0.02 and 0.03 for checking mastery at the end of the lesson. P-values of 0.01 and 0.02 for using supportive questioning.

²⁰⁴ P-values of 0.04.

²⁰⁵ P-value = 0.04, 0.08 and 0.06 for 11–15 years, 16–20 years, and 21+ years respectively.

Figure 47: Kenya – Literacy assessment strategies

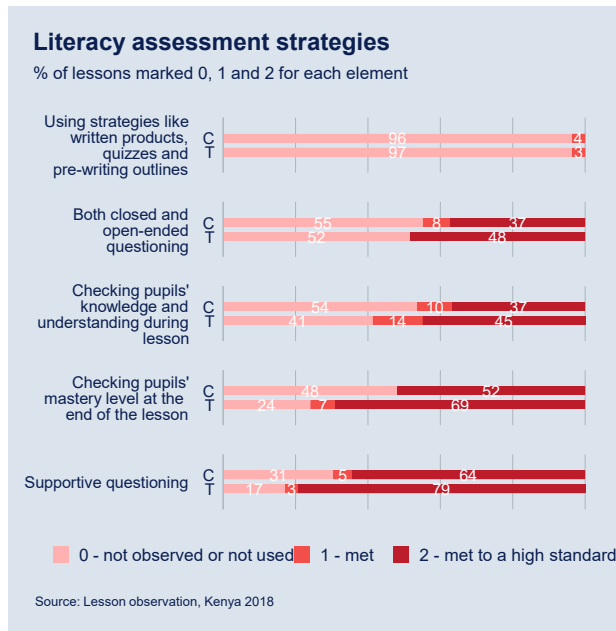


Figure 48: Nigeria – Literacy assessment strategies

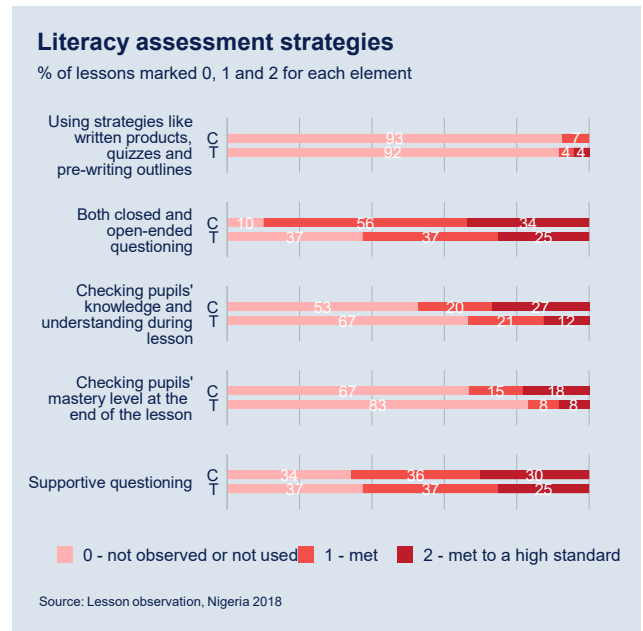
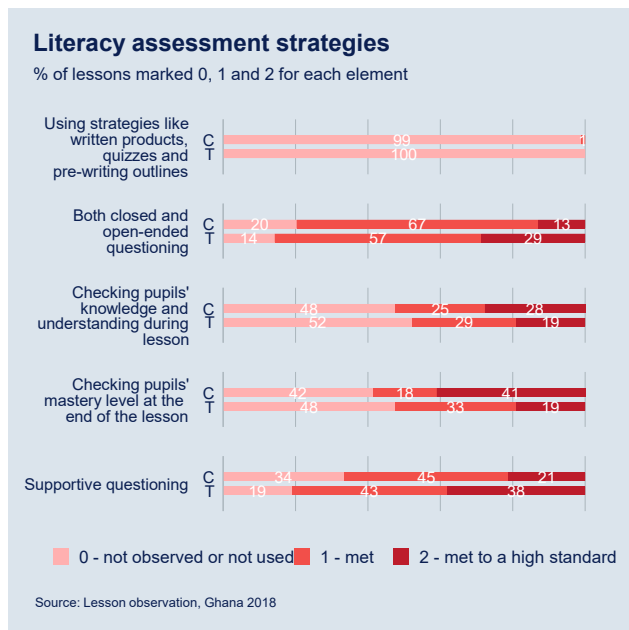


Figure 49: Ghana – Literacy assessment strategies



The most common strategies were supportive questioning and the use of closed- and open-ended questions (both strategies being used in about 70% of lessons overall). Checking pupils' understanding during the lesson and checking mastery at the end of the lesson were both used in about half of lessons overall (although the latter was only used in a quarter of lessons in Nigeria). As in numeracy lessons, strategies like quizzes were used only rarely.

Observer comments

As with numeracy assessment, comments about *supportive questioning* mostly described the teacher giving pupils time to think and repeating or rephrasing questions where necessary.

Observers provided examples of *open-ended questions* used by teachers. These included:

- Kenya:
 - Describe a picture.
 - Give a sentence using the word [word].
 - What is the definition of a conjunction? What are some examples?
 - Write words that have the same sound, but different meaning.
 - Write about the importance of tea to the Kenyan economy.
 - What did you learn from the passage?
- Ghana
 - How do fishermen catch fish?
 - What do you do when in a vehicle in terms of road safety?
 - Name a feature of a friendly letter.
 - How do we improve our health?
 - Write stories based on a video.

When teachers *checked pupils' knowledge and understanding during the lesson and at the end*, they did so using exercises and questions. These were more varied than for mathematics, reflecting a broader range of lesson content.

Correlations with other factors

The regression analysis identified a few statistically significant correlations:

- Treatment/control:
 - In Kenya, teachers in treatment schools were more likely to check pupils' understanding during the lesson than those in control schools.²⁰⁶
 - In Nigeria, treatment schools used closed- and open-ended questions more frequently than control schools.²⁰⁷
- Kenya counties:
 - In Nairobi, teachers were more likely to use closed- and open-ended questions than in other districts.²⁰⁸
 - In Nairobi and Machakos, teachers were more likely to use supportive questioning than in other districts.²⁰⁹

²⁰⁶ P-value = 0.09.

²⁰⁷ P-value = 0.06.

²⁰⁸ P-value = 0.03.

²⁰⁹ P-value = 0.00 and 0.05 respectively.

- Teacher characteristics:
 - In Kenya, greater teacher experience was correlated with a greater likelihood that the teacher was effectively checking pupils' understanding during the lesson.²¹⁰

Summary

- The most common strategies are supportive questioning and closed- and open-ended questions, which were used in about 70% of lessons overall.
- In about half of lessons, teachers made efforts to check pupils' understanding during and at the end of the lesson.
- There were some small differences between the assessment strategies used in treatment schools and those used in controls schools in Kenya and Nigeria.

Discussion

A teacher's ability to assess and react to pupils' levels of understanding and progress is crucial for pupil-centred teaching. If summative assessment or longer-term outcomes are relied upon to give feedback about the effectiveness of teaching, it is too late for a teacher to respond. Teachers need to develop the ability to assess the learning levels of different pupils within their class and observe how they respond to different approaches and methods. They can then adapt and tailor their approaches to those that are likely to improve learning outcomes the most. This is a complex but important set of skills that need to be developed, and an added focus of DP-2.

Although teachers often use frequent questions throughout the lesson, individual or group work to demonstrate understanding by all pupils is much rarer, particularly in Nigeria and Ghana.

Assessment for learning is only useful in so far as it influences practice. As we will see, teachers appear to be unresponsive to the poor literacy skills of their pupils. It is not clear whether this is because they are unaware of the problem, do not know how to address it, or other factors and incentive structures prevent them from doing so. The activities observed in the classroom suggest that teachers are likely to be aware of the problem to some extent (often, pupils read aloud). They may not know enough about the problem (who struggles more than others, what they need to learn to make progress, etc.). Indeed, the lack of group or individual work in Nigeria and Ghana suggests that they may only be gathering information about the skills of the more confident children who are willing to read to the class and answer questions in a whole-class context.

Perhaps unsurprisingly given the lack of pupil-specific learning information that many teachers gather, differentiated teaching and learning are seldom considered or demonstrated in lessons (as discussed further later in the chapter). Teachers appear not to gather information about the different levels of skill and understanding in their classroom, so they are not in a position (even if they had the necessary skills and knowledge) to respond to the different needs.

5.2.5 Numeracy lessons

This section describes the observations based on indicators that are specific to numeracy lessons.

²¹⁰ P-value = 0.07, 0.07 and 0.01 for 3–5, 6–10, and 11–15 years' experience respectively, compared with 0–2 years' experience.

Numeracy units and aspects of the study

There are two indicators to provide information about the content of the lesson: unit of study and aspect of numeracy. It is important to take note of these as they influence which teaching approaches might be most effective.

Table 42 presents the percentages of lessons containing each unit of mathematics.

Table 42: Mathematics unit of study – percentage of lessons containing each unit

	Kenya		Nigeria		Ghana	
	Control	Treatment	Control	Treatment	Control	Treatment
Numbers and operations	66%	56%	70%	91%	64%	73%
Measurement	25%	26%	17%	9%	17%	5%
Geometry and spatial sense	3%	11%	17%	9%	18%	5%
Patterning and algebra	12%	0%	0%	3%	1%	0%
Data management and probability	0%	11%	11%	17%	8%	22%
Other	0%	4%	0%	0%	2%	5%

Source: Lesson observation survey, Kenya, Nigeria, and Ghana 2018. Question: Which one or more of the following is the content area of the lesson?

The free text descriptions of lesson subjects, combined with

Table 42, show that arithmetic operations and fractions and decimals were the most common areas of study. Lessons on measurement (units, volumes, circumference, etc.) were also fairly common. Some lessons also covered geometry and algebra. More details are provided in Annex 23.

Table 43 shows the numeracy aspects in order of frequency. There is a fairly even distribution of topics in all countries. The most common aspect was understanding mathematical concepts. Procedural fluency was particularly common in Kenya (memorising processes). Problem solving (often solving word problems) was less common in Kenya than in the other two countries. Mental mathematics was particularly common in Nigeria. The meaning of the aspects is less obvious than the topics discussed above, so it is helpful to discuss the concepts and the observations made by enumerators to understand what was being taught. Annex 23 provides definitions of each aspect.

Table 43: Aspects of numeracy – percentage of lessons containing each aspect

	Kenya		Nigeria		Ghana	
	Control	Treatment	Control	Treatment	Control	Treatment
Understanding mathematical concepts	30%	26%	65%	69%	74%	59%
Problem solving	18%	7%	48%	60%	39%	27%
Mathematical communication: vocabulary	20%	19%	46%	31%	33%	43%
Procedural fluency	36%	37%	1%	14%	20%	41%
Mental mathematics	2%	4%	49%	46%	10%	11%
Mathematical communication: reasoning and justifying	18%	30%	5%	17%	24%	8%
Other	3%	0%	6%	0%	0%	0%

Source: Lesson observation survey, Kenya, Nigeria, and Ghana 2018. Question: Which one or more aspect of numeracy is the focus of the lesson?

Numeracy teaching and learning approaches

Key to understanding whether teaching is student-centred is observing which teaching methods are used. Enumerators identified whether teachers were using any of eight approaches during the lesson. For each, they selected a score from 0 to 2:

0 (not observed/used)	The approach is not observed.
1 (met)	The teacher is making some attempt at using the approach, and there is a limited engagement of pupils.
2 (met to a high standard)	The teacher is using the approach effectively, and all or the great majority of pupils understand and are engaged.

For all approaches, the engagement of pupils is a necessary condition for its success. Table 44 lists the teaching and learning approaches. It also identifies the aspects of mathematics for which each is particularly appropriate, which we will refer to later in this section.

Table 44: Numeracy teaching and learning approaches matched with aspects for which they are most appropriate

Approach	Most appropriate for teaching these aspects
1. The teacher fosters pupils' number sense including understanding of numbers, relationships, and mental maths	Mental mathematics
2. The teacher helps pupils to appreciate the value of mathematics in their lives and where it fits naturally and usefully in their homes and elsewhere	

Approach	Most appropriate for teaching these aspects
3. The teacher uses relevant physical models, objects, drawings, pictures, and diagrams to aid mathematical understanding (for example: bundling to develop the concept of place value)	Understanding mathematical concepts
4. The teacher requires pupils to communicate their mathematical knowledge and understanding in a variety of ways (for example, writing, drawing, diagrams, graphics, talking, and modelling)	Mathematical communication: vocabulary
5. The teacher engages all pupils actively in mathematics (for example, games and other activities that involve them in observation, investigation, reasoning, discussion, communication, and reflection using drama, art, music, or movement)	Mathematical communication: vocabulary
	Mathematical communication: reasoning and justification
6. The teacher explains mathematical vocabulary and concepts clearly by making connections from the known to the unknown	Understanding mathematical concepts
	Mathematical communication: vocabulary
7. The teacher provides opportunities for pupils to demonstrate understanding and application of mathematical concepts and procedures (for example, through written work, use of mathematical models, role play, etc.)	Understanding mathematical concepts
	Procedural fluency
	Problem solving
	Mathematical communication: reasoning and justification
8. The teacher displays an enthusiasm for mathematics and encourages pupils to have a 'can-do' attitude (that is, emphasises the importance of effort rather than innate ability)	

Figure 50 to Figure 55 show the scores for numeracy teaching and learning approaches, by country. Descriptions of each approach are provided in Annex 23.

In Kenya and Nigeria, teachers were most likely to display enthusiasm for the subject and encourage a can-do attitude. This was partly through their demeanour, but more often through praise and encouragement.

In Kenya, teachers provided opportunities for students to show understanding, explained key vocabulary and concepts, and engaged pupils actively fairly frequently.

In Nigeria, fostering pupils' number sense was the next most frequent approach. Other methods were used with a fairly similar frequency of around 25–40%.

Although the differences in observers make comparisons between countries uncertain, it appears that teachers in Ghana were much less likely to demonstrate enthusiasm for the subject. The most common approaches were engaging pupils actively, providing opportunities for them to demonstrate understanding, and using models and diagrams.

Figure 50: Kenya – Numeracy teaching and learning approaches 1-4

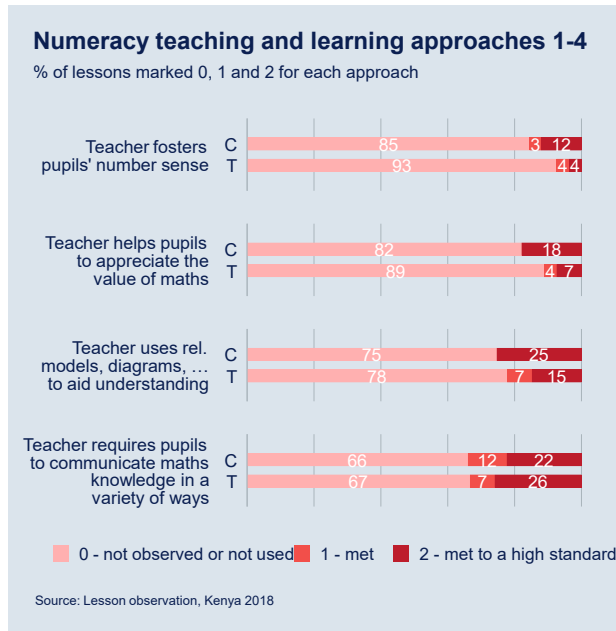


Figure 51: Kenya – Numeracy teaching and learning approaches 5-8

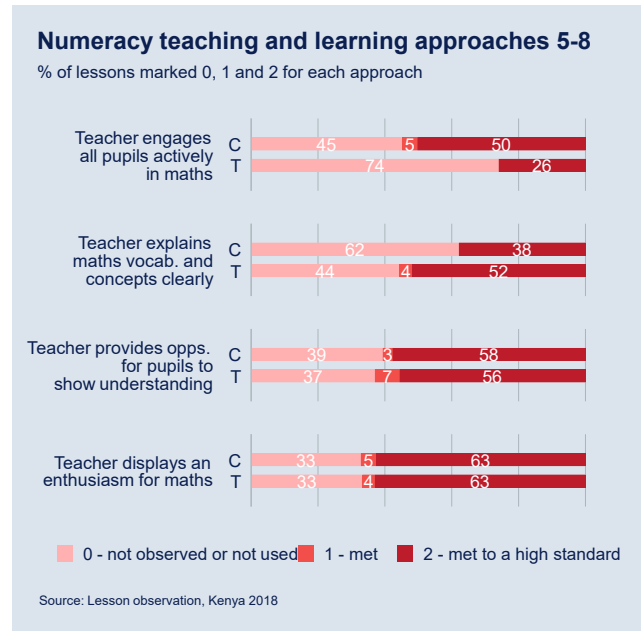


Figure 52: Nigeria – Numeracy teaching and learning approaches 1-4

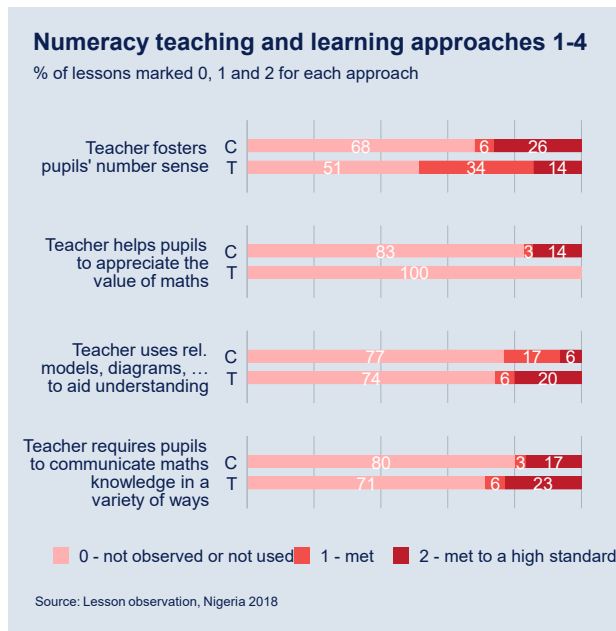


Figure 53: Nigeria – Numeracy teaching and learning approaches 5-8

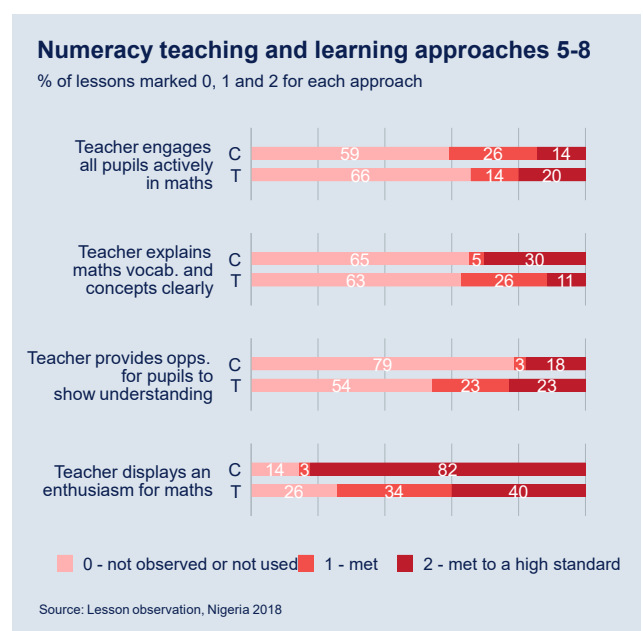


Figure 54: Ghana – Numeracy teaching and learning approaches 1-4

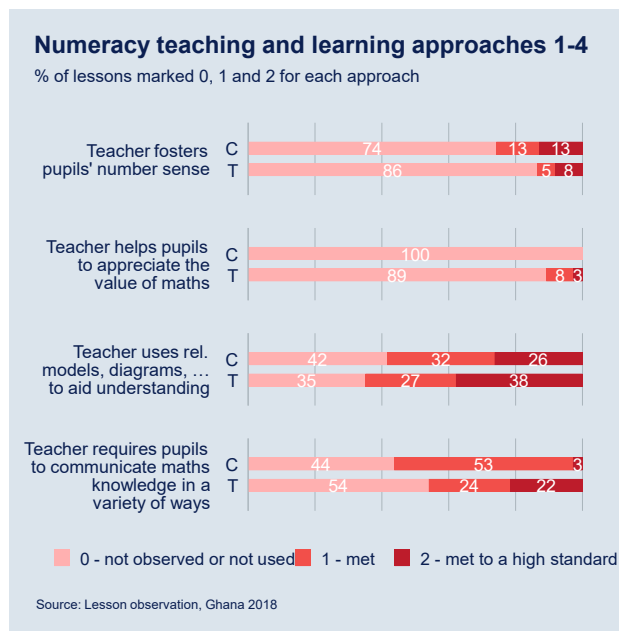
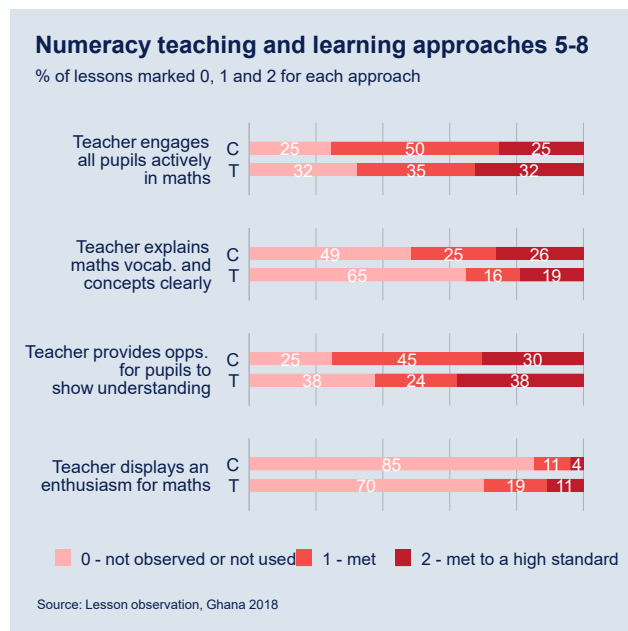


Figure 55: Ghana – Numeracy teaching and learning approaches 5-8



Correlations with other factors

Probit regressions identified the following correlations with aspects of numeracy (see Table 46 for the pairings that we might expect if teachers are using the most appropriate method to teach the content):

- Treatment/control:
 - The only significant correlation between the teaching method used and whether the school was a treatment or control school was that, in Kenya, lessons in treatment schools were less likely to engage all pupils.²¹¹
 - By focus of the lesson:
 - When teachers were teaching understanding of mathematical concepts, there were more likely to use the following approaches:
 - Explain mathematical vocabulary (Ghana),²¹² an approach we would particularly expect teachers to use
 - Engage all pupils (Ghana)²¹³
 - Foster number sense (Nigeria)²¹⁴
 - Help pupils to appreciate the value of mathematics (Nigeria)²¹⁵
- There were no significant correlations with using models, explaining vocabulary, or providing opportunities for students to demonstrate understanding.

²¹¹ P-value = 0.04.

²¹² P-value = 0.02.

²¹³ P-value = 0.03.

²¹⁴ P-value = 0.04.

²¹⁵ P-value = 0.06.

- When teachers were teaching mathematical vocabulary they were more likely to use the following approaches:

- Explaining vocabulary and concepts (Ghana)²¹⁶
- Engage all students (Nigeria)²¹⁷ – both would be expected.

There were no significant correlations with requiring pupils to communicate their mathematical knowledge.

- When teachers were teaching *mathematical communication: reasoning and justification* they were more likely to use the following approaches:

- Explain mathematical vocabulary and concepts (Kenya and Ghana)²¹⁸
- Use appropriate models etc. (Nigeria)²¹⁹

There were no significant correlations with engaging all students or providing opportunities for them to demonstrate understanding.

- When teachers were teaching *procedural fluency* they were more likely to use the following approaches:

- Explain mathematical vocabulary and processes (Nigeria and Ghana)²²⁰

There were no significant correlations with providing opportunities for pupils to demonstrate understanding.

- When teachers were teaching *problem solving* they were more likely to use the following approaches:

- Provide opportunities for pupils to demonstrate understanding (Ghana),²²¹ which should be used more in these lessons
- Use appropriate models, etc. (Ghana)²²²

Summary

- On the whole, the use of the eight strategies was limited.
- Where they were used, it was only to a high standard about half of the time.
- Teachers engaging all students and providing opportunities for them to demonstrate understanding was relatively common in Ghana (about 70% of lessons).
- Regression analysis suggests that in Ghana these methods were often particularly common in the lessons where they might be most appropriately applied.
- In Kenya and Nigeria, it appears that the selection of when to use each method is not in line with what we would consider to be optimal.
- In Kenya, we did not observe the correlations of method to subject that might be seen as optimal (i.e. using the correct method to teach the approach). In Nigeria, we only observed a significant correlation where expected once.

5.2.6 Literacy lessons

This section describes the observations about literacy lesson content and the teaching methods used.

²¹⁶ P-value = 0.02.

²¹⁷ P-value = 0.02.

²¹⁸ P-value = 0.02 and 0.00 respectively.

²¹⁹ P-value = 0.07.

²²⁰ P-value = 0.06 and 0.01 respectively.

²²¹ P-value = 0.01.

²²² P-value = 0.04.

Literacy units of study

It is first important to note the content of the lessons observed so that we can consider whether the methods used are appropriate and consistent with student-centred practices. Table 45 shows the units of study in treatment and control lessons in each of the three countries. More information about the definition of each unit is provided in Annex 23.

Table 45: Literacy unit of study – percentage of lessons containing each unit

	Kenya		Nigeria		Ghana	
	Control	Treatment	Control	Treatment	Control	Treatment
Vocabulary development	45%	41%	31%	71%	52%	38%
Oral language development	58%	45%	45%	29%	47%	52%
Text comprehension, listening, and reading	21%	21%	23%	33%	64%	43%
Fluency building	10%	10%	20%	17%	32%	14%
Phonological awareness	0%	0%	22%	29%	26%	0%
Phonics and decoding	6%	3%	34%	17%	0%	10%
Book knowledge and print concepts	10%	0%	7%	17%	17%	0%
Spelling and handwriting	0%	3%	26%	17%	0%	0%
Alphabet knowledge	0%	3%	23%	4%	1%	5%
Written expression	5%	3%	0%	0%	13%	10%
Other	7%	0%	0%	0%	9%	5%

Source: Lesson observation survey, Kenya, Nigeria, and Ghana 2018. Question: Which one or more of the following is the content area of the lesson?

Oral language development and vocabulary development were the most common topics taught, followed by text comprehension and fluency building.

Phonological awareness was not recorded as being taught in Kenya. Where it was taught most, in Nigeria, it consisted of learning about rhymes.

Literacy teaching and learning approaches

This section seeks to provide information about whether the approaches to the teaching and learning of literacy are appropriate and effective. This partly depends on what is being taught (see Table 45) and partly depends on pupils' level of development. Enumerators identified whether teachers were using any of 15 approaches during the lesson. For each, they selected a score from 0 to 2, with 0 indicating that the approach was not observed and 2 indicating that the approach was used effectively and the majority of pupils understood and were engaged. Details of the teaching methods are provided in Annex 23. Table 46 lists the teaching and learning approaches. It also identifies the aspects of literacy for which each is particularly appropriate.

Table 46: Literacy teaching and learning approaches matched with aspects for which they are most appropriate

Approach	Most appropriate for teaching these aspects
1. Pupils are given opportunities to choose books/ stories	
2. Pupils are taught the phonics rules	Phonological awareness Phonics and decoding
3. The teacher employs comprehension strategies	Text comprehension, listening and reading
4. Pupils are helped to develop their writing skills	Written expression
5. Pupils are taught to use knowledge of the sounds that letters make to decode words	Phonics and decoding
6. Pupils are taught how language is communicated through print	Book knowledge and print concepts
7. Pupils are taught the necessary conventions of written expression (includes punctuation and consideration of purpose and audience)	Alphabet knowledge Written expression Spelling and handwriting
8. The teacher uses a range of activities to teach pupils the sound structure of language	Phonemic awareness Alphabet knowledge Phonics and decoding
9. Fluency building (read accurately, swiftly, and with correct expression)	Book knowledge and print concepts Fluency building
10. The teacher selects books/stories that are relevant to the lives of pupils	Fluency building
11. The teacher reads interactively to pupils	Fluency building
12. The teacher uses interactive teaching and learning materials	
13. The teacher generates enthusiasm and appreciation for reading	Fluency building
14. Pupils' oral and reading vocabulary is expanded	Oral language development Fluency building Vocabulary building
15. Pupils are given opportunities to speak and listen to the teacher and other pupils	Oral language development

Figure 56 to Figure 64 show the scores for all 15 literacy teaching and learning approaches, in increasing order of frequency of use by country.

Figure 56: Kenya – Literacy teaching and learning approaches 1-5

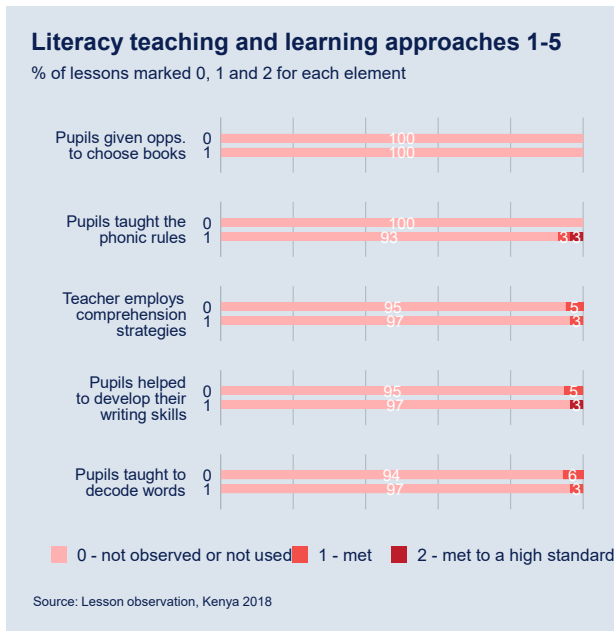


Figure 57: Kenya – Literacy teaching and learning approaches 6-10

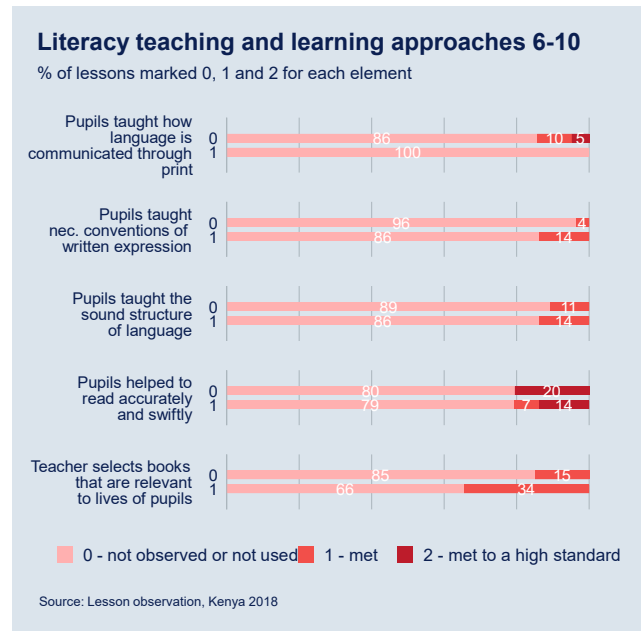


Figure 58: Kenya – Literacy teaching and learning approaches 11-15

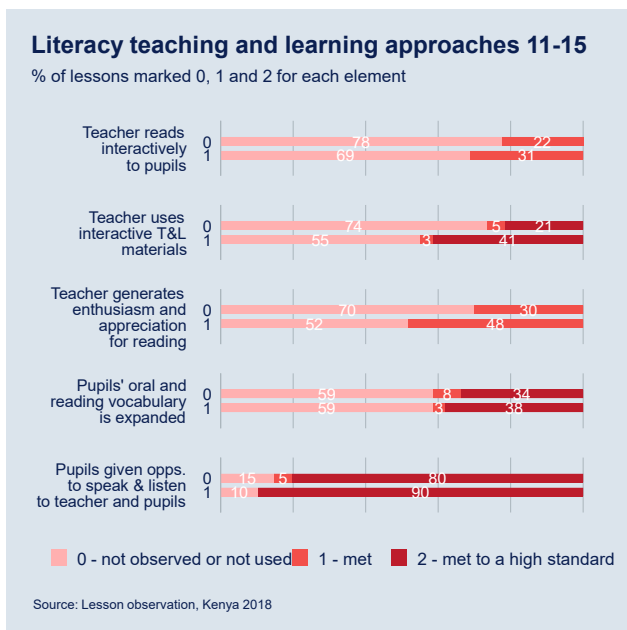


Figure 59: Nigeria – Literacy teaching and learning approaches 1-5

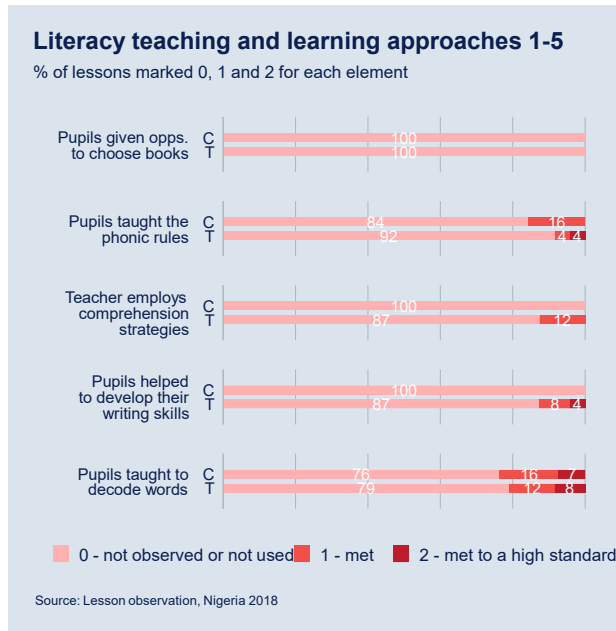


Figure 60: Nigeria – Literacy teaching and learning approaches 6-10

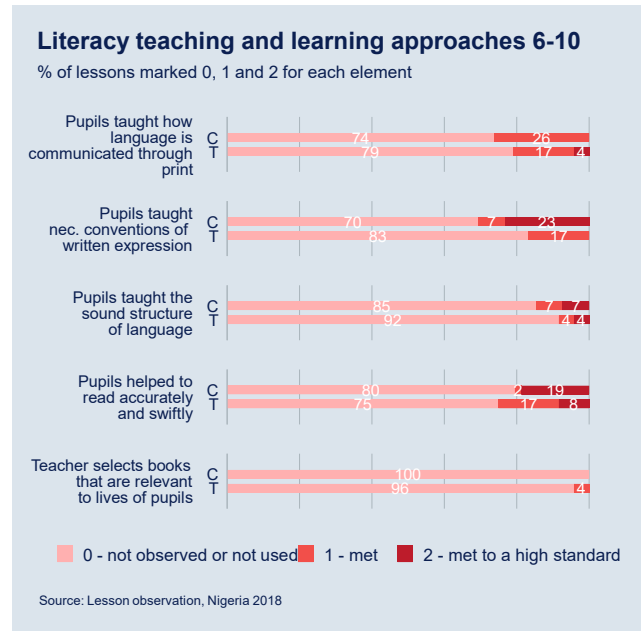


Figure 61: Nigeria – Literacy teaching and learning approaches 11-15

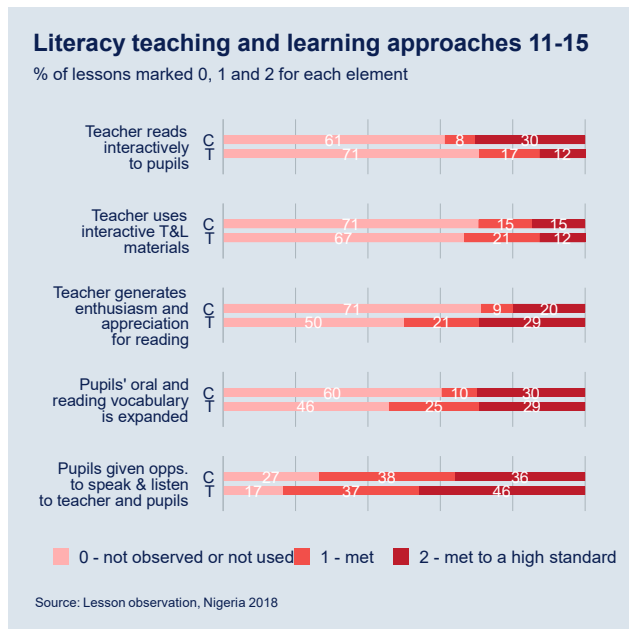


Figure 62: Ghana – Literacy teaching and learning approaches 1-5

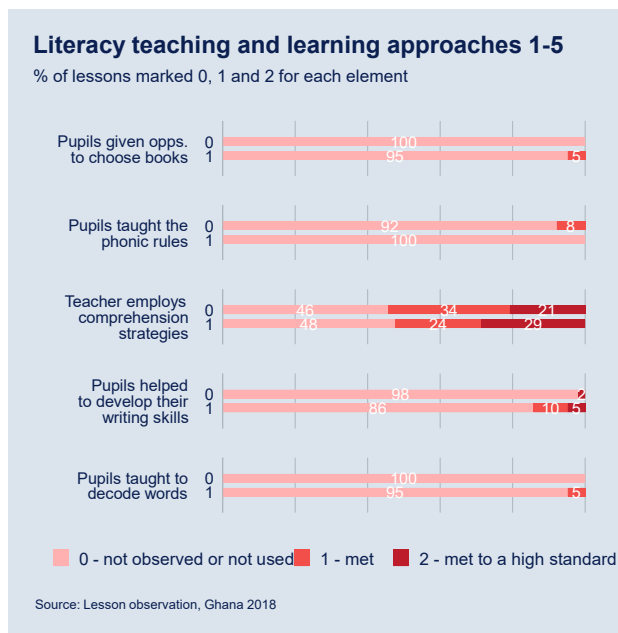


Figure 63: Ghana – Literacy teaching and learning approaches 6-10

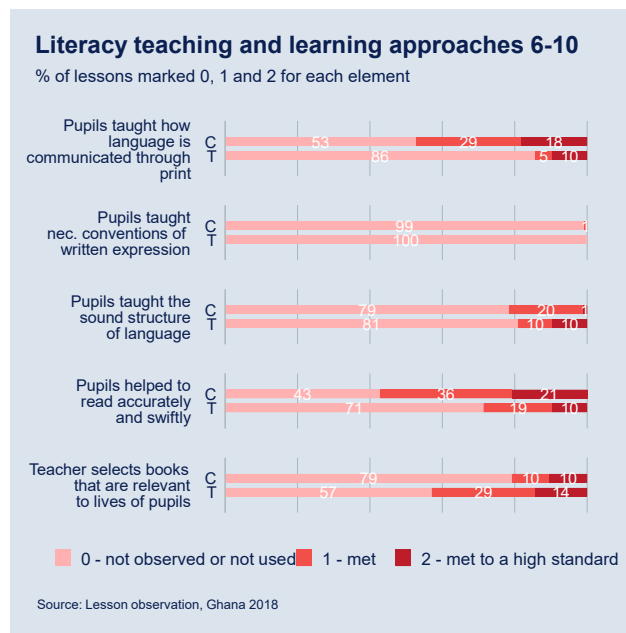
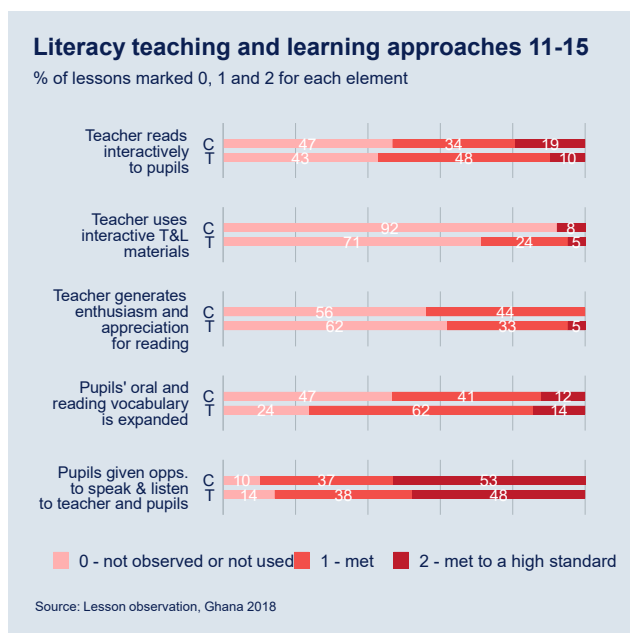


Figure 64: Ghana – Literacy teaching and learning approaches 11-15



What is most striking is that most approaches were used very rarely. Pupils are not being taught the building blocks of literacy – i.e. the sound structure of language, phonics rules, or word decoding. If pupils have not picked up such skills by this stage, they may be unlikely to catch up.

Similarly, pupils are only helped to read accurately and swiftly in about 20% of lessons in Kenya and Nigeria and 40% in Ghana (although mostly fairly ineffectively).

The use of comprehension strategies is almost entirely absent from lessons in Kenya and Nigeria. In Ghana, they were observed in about half of literacy lessons but only half of these were deemed to effectively engage pupils.

Annex 23 shows that literacy levels are poor, particularly in Nigeria. It would therefore likely be beneficial for teachers to respond by using methods that enable pupils to improve in this area. Although there may be a lack of confidence or skill in using these methods, pressures to teach to the curriculum are also likely to drive the observed behaviour. Teachers also face other challenges that make it more difficult to employ some of the methods, such as large class sizes, multi-grade classes, and limited resources. We should therefore be cautious about interpreting all results as skills shortfalls rather than as effects of incentives and expectations or resourcing issues.

On the other end of the scale, the only approach that was used in the majority of lessons in all three countries was giving pupils opportunities to speak and listen to the teacher and pupils. These were largely question and answer sessions, or sometimes pupils being asked to read. The success in engaging pupils in these activities was mixed.

Vocabulary development occurred in about half of lessons and teachers tried to generate enthusiasm for reading in about 40% of lessons.

Interactive materials²²³ were used in about 20% (Ghana) to 35% (Kenya) of lessons. Teachers read interactively to pupils in 27%, 35%, and 55% of lessons in Kenya, Nigeria, and Ghana, respectively. Particularly in Kenya and Ghana, teachers appeared to struggle to engage the majority of pupils in this activity.

Correlations with other factors

Probit regressions identified the following correlations with the literacy teaching methods used:

- Treatment/control:
 - The only correlation was in Ghana where control lessons were more likely to cover how language is communicated through print.
- Units of study. There are significant correlations that suggest that methods are being deployed at the right time (as shown in Table 46). These are not observed for more advanced skills like *comprehension* and *written expression*, suggesting possible limitations in the teaching of these skills.
 - When the scope of the lesson included *oral language development*, it was more likely to include pupils being given the opportunity to speak and listen to other pupils (Nigeria).²²⁴
 - Lessons that taught pupils *book knowledge and print concepts* were more likely to include teaching about how language is communicated through print (Nigeria).²²⁵ This would be expected.
 - Lessons that included the teaching of *alphabet knowledge* were more likely to include:
 - Activities to teach pupils the sound structure of language (Ghana);²²⁶ and

²²³ Examples included: flash cards (most common); reading materials; camera; video (twice in Ghana).

²²⁴ P-value = 0.03.

²²⁵ P-value = 0.01.

²²⁶ P-value = 0.03.

- Teaching about phonics rules (Nigeria).²²⁷
- o Lessons that included the teaching of *phonics and decoding* were more likely to include:
 - Methods to teach the phonics rules (Kenya);²²⁸ and
 - Teaching pupils to apply knowledge of the sounds that letters make to decode words (Nigeria).²²⁹
- o Lessons that included a focus on *developing pupils' reading fluency* were more likely to include:
 - Methods to help pupils read accurately, swiftly and with correct expression (Nigeria);²³⁰ and
 - Pupils being given the opportunity to speak and listen to the teacher and other pupils (Nigeria).²³¹
- Kenyan counties – In Nairobi:
 - o Pupils were more likely to be given (more and better) opportunities to speak and listen to the teacher and other pupils and to expand their vocabulary;²³² and
 - o Pupils were less likely to be taught the sound structure of language.²³³

Summary

- Methods to teach foundational literacy skills are rare.
- Similarly, comprehension strategies were rarely observed, and when they were teachers often failed to engage the majority of pupils.
- Patterns of teaching and learning approaches were similar in treatment schools to control schools.
- Regression analysis suggests that teaching and learning approaches are being used in lessons for which they are well suited.
- Teaching and learning approaches do not vary significantly depending on teacher characteristics or class size.

5.2.7 Teacher survey

In order to garner information about how consciously teachers thought about the way they taught the lesson, enumerators asked them to give an example from the lesson that was observed of: (i) active learning; (ii) supportive questioning; (iii) differentiated teaching; and (iv) checking for mastery.

Active learning

The responses suggest that teachers were most likely to articulate examples of question and answer sessions (the words 'question' and 'answer' were the two most frequent significant words used in responses). Much fewer teachers mentioned 'activities' (3%, 5%, and 19% in Kenya, Nigeria, and Ghana, respectively), 'exercises' (7%, 1%, and 2% respectively) or group work (1% overall). This suggests a teaching approach centred around delivery from the front, but likely with a reasonable amount of interaction between teachers and pupils.

Supportive questioning

Teachers' examples of supportive questioning suggest limited understanding. Only 13% mention giving pupils 'time to think', while 6% mentioned 'rephrasing', 6% mentioned 'repeating'. and 6% mentioned 'explaining'. Just 3% used the word 'encourage'.

²²⁷ P-value = 0.02.

²²⁸ P-value = 0.06.

²²⁹ P-value = 0.02.

²³⁰ P-value = 0.00.

²³¹ P-value = 0.01.

²³² P-value = 0.02 and 0.05 respectively.

²³³ P-value = 0.03.

Differentiated teaching

Fewer teachers attempted to provide an example of differentiated teaching, likely reflecting that they had not given consideration to differentiation in the observed lesson. Teachers in Kenya were more likely to provide a meaningful answer. They used the words ‘involving’, ‘equal’, and ‘help’ 14%, 12%, and 10%, respectively (compared with 0–1% for the other two countries).

Checking for mastery

Teachers in Nigeria had particular difficulty in providing examples of checking for mastery. Those in Kenya and Ghana provided examples of setting ‘exercises’ most often (34% of teachers in Kenya and 39% of teachers in Ghana mentioned the word). Teachers in Kenya used the words ‘marks’ (43%), ‘checking’ (30%), and ‘correctly’ (23%) fairly frequently, suggesting that they sought evidence of student understanding more deliberately. This marked a noticeable difference with teachers in Nigeria and Ghana who rarely mentioned these words.

Summary

- When asked to provide an example of active learning from the lesson, teachers’ responses mostly included question and answer sessions – a front-led method.
- Only a minority of teachers provided meaningful examples of supportive questioning.
- Differentiated teaching does not appear to be a particular consideration for the surveyed teachers.
- Teachers in Kenya appear to seek evidence of pupils’ understanding more deliberately than those in Nigeria and Ghana.

5.2.8 Qualitative research on the quality of teaching

Qualitative research provides useful information about the perceptions of students, parents, and teachers about the quality of teaching and the factors that influence it. It particularly provides insight into how teachers perceive the DP training they receive and the ways they have benefited from it. Qualitative findings start with the background of the teachers, and in particular present the key findings about the DP training modules teachers were trained on.

DP-2 training

As is suggested in the literature, the availability of well-trained teachers (pre-service teacher training, in-service professional development, and the informal training obtained through on-the-job experience) is central to improving the quality of education at both primary and secondary levels in many countries.²³⁴ Furthermore, content-focused teacher training is thought to contribute to improvements in the quality of education.²³⁵ All teachers in our sample underwent part 1 DP teacher training on literacy and numeracy modules. The general consensus is that the DP training has had a positive impact on teaching. It is also worth mentioning that DP teacher training does not function on its own but is part of a wider set of similar training conducted in all three countries (e.g. the DFID-supported Teacher Development Programme and Education Sector Support Programme in Nigeria). Therefore, the existence of other training and

²³⁴ Harris and Sass (2006) and Mpokosa and Ndaruhutse (2008), cited in Abebe, W. and Woldehanna, T. (2013) ‘Teacher Training and Development in Ethiopia: Improving Education Quality by Developing Teacher Skills, Attitudes and Work Conditions’. *Young Lives Working Paper 103* accessed on 15 July 2018 from <https://assets.publishing.service.gov.uk/media/57a08a2c40f0b64974000474/yj-wp103-abebe-woldehanna.pdf>.

²³⁵ Harris and Sass (2006), cited in Ibid.

education programme limits the extent to which improvements in teaching outcomes can be attributed solely to DP-2.

The general consensus is that the DP training has had a positive impact on teaching. Eleven out of 27 teachers in Nigeria reported that the training has improved their self-confidence as well as their understanding of how to better apply the audio-visual teaching aids in delivering their lessons. Trainings are modelled on an actual classroom where teachers are grouped together to do activities; individual participation is encouraged, female and male teachers are given equal opportunity to contribute, and the same materials meant to be used for actual classes are used during the training, making it easier for teachers to understand and apply in the classroom. Teachers believe that the training has improved lesson delivery and classroom management skills (specifically the use of techniques to keep the children's attention, control noise, and reduce loitering). Teachers in Kenya also appreciate the DP training and believe it has improved teaching and learning practice. They suggest that training provided by DP, especially in English, helped them develop their knowledge and confidence in delivering their lessons. However, we found that teachers in Nigeria seem to be less confident in their command of English, although the LOI at all the schools visited is Hausa and English teachers noted that Hausa is used predominantly (the researchers note that, even though written in Hausa, the literacy levels are visibly low). Interviewers found that the teachers were generally more comfortable communicating in Hausa, as was similarly noted with the cohort girls who completed the diary exercise in Hausa. Consequently, we can assume that Nigerian teachers might struggle with DP training delivered in English, which cannot but affect their teaching and using DP resources. In contrast, teachers in Kenya commended the training provided by DP in English, saying it helped them develop their knowledge and confidence in delivering their lessons. Consequently, we can thus suggest that teachers in the three countries benefit from the DP training in different ways, where Nigerian teachers might benefit the least since the DP training is delivered in English. In support of this suggestion, according to the teachers interviewed, step-down training is delivered in Hausa and this is more appreciated by the trained teachers.

Teaching practice

Teaching practices vary greatly in the schools and are deeply entrenched in the style and tradition of teaching in each school and country. During the qualitative baseline in Kenya, we came across several examples of how schools were motivating their students to learn. We also came across teachers who were less supportive, although these were often isolated accounts. In Kajiado in Kenya, some teachers use praise whereas others use punishment to persuade their students to learn. Similarly, in Machakos, teachers said that the school has always encouraged children to do well in maths, and has been encouraging them. This school also give small gifts when children perform well and tutor children if they are not performing well. This does not go unnoticed by parents or students, who appreciate the effort that is being made by the school.

In Nigeria, in one of the public schools, individuals involved in CAP activities reported that, in their interactions with parents, parents feel that their children do not understand what they are being taught and thus end up withdrawing their children to send them to Islamic schools. Parents in the three public schools felt that teachers need to 'make an effort' to ensure that their children perform well in schools.

Teachers in all three countries have adopted certain components of gender inclusiveness in the classroom, such as encouraging equal participation in all schools' activities for both girls and boys (class presentations, group leaders, etc.), grouping boys and girls together, using examples from both boys and girls in the classroom and of male and female figures for students to aspire to, and how to motivate

learning through praise regardless of whether a child's response is incorrect or correct. For example, two girls in Nigeria disclosed during the rich picture exercise that they were group leaders of their groups in class and provide explanations to group members when they do not understand concepts and language delivery, an approach which was initiated within the last two terms. In Ghana, many teachers admitted that they invariably ended up focusing on those students who were more enthusiastically answering more questions in the first place or who were 'smarter'. They felt that some of the DP training helped them to reflect on and understand better ways in which to engage a wider range of boys and girls more actively in class toward improving their class participation. They also said that earlier they mostly ended up asking only the girls to read out loud in class, but have now become more much aware of balancing this activity out. Furthermore, some teachers also expressed that their classes used to be much more physically segregated but they have now been making a more deliberate effort to mix up the seating arrangements to encourage more interaction between boys and girls.

Corporal punishment

What is similar across all the countries is corporal punishment of children, which is prevalent in each country we visited but seems to be a bigger issue in Kenya. The use of physical violence for discipline seems to be a well-established norm in many schools; as one parent put it in Kenya, children face caning 'of the normal' type and the 'extreme' type.

This needs to be understood in the context of social norms shared across all our countries and related to how children are brought up and educated. Many adults and children believe corporal punishment to be an effective disciplinary method, important in generating respect and in teaching children to become responsible adults. In addition to social norms, we can assume that poverty also has indirect consequences in terms of putting certain children at risk of being physically punished more than others. As we discussed earlier, economic constraints and family circumstances mean that boys and girls frequently engage in seasonal agricultural work on family farms, come to school late after doing their chores, or occasionally miss school. This could mean that children then end up not performing well at school and being punished physically. In their diaries, children in Kenya referred to being hit in school for coming late, making noise, not listening to their teacher's instructions, or not completing their work. Similarly, children, as well as teachers in Ghana, spoke about children being punished if they were late or absent. In some cases, they described the punishment as cleaning the school's toilets and bathrooms, while in some it was caning. If a child misses school to go to the farm, they are punished for doing so. In Kenya, one of the other reasons for the physical punishment of children was suggested as 'adolescent changes' when children start behaving strangely and fight with teachers.

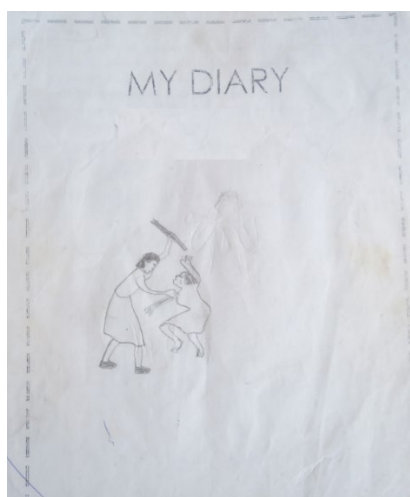
A large body of research in the Global North consistently claims that hitting children increases the chances of a child becoming physically aggressive, delinquent, or both²³⁶. This suggests that the corporal punishment practised by teachers at school can also inform children's own behaviours among themselves and thus increase incidents of violence. In this way, physical discipline at school in fact contributes to the normalisation of violence and can have an indirect effect on children beyond the school premises. Further, in two incidences in Kenya, the violence has gone both ways – students have hit their teachers in school and teachers have hit students.

²³⁶ Gulbenkian Foundation (1995) 'Children and Violence'. Report of the Commission on Children and Violence Convened by the Calouste Gulbenkian Foundation, London: Gulbenkian; Durrant, J. and A. Smith (2011) (eds) *Global Pathways to Abolishing Physical Punishment*, London: Routledge

Furthermore, punishment affects the interpersonal relationship between the teacher and the student, which is a very important dimension of teaching and learning. The teacher's attitude and disposition toward the students can affect student's learning outcomes²³⁷ and influence their desire to come to school. Although the lasting impacts of corporal punishment on children's development is contested, a study²³⁸ found that corporal punishment experienced at the age of eight is negatively associated with maths scores at age 12 in India, Peru, and Vietnam. According to the study, in children's own words, corporal punishment does not help improve their learning or behaviour but leaves them scared, confused, and sad. In their diaries, girls in Kenya write about how such punishment made them sad and how such punishment is unfair. Girls also write about how witnessing their friends being hit also makes them sad. In Ghana, during the rich picture exercise girls talked about being upset if they were punished for being late for the roll-call or were reprimanded for not being able to answer questions correctly, which would make the teacher unhappy. In contrast, girls felt loved and praised by the teacher if they answered questions correctly and if they were early to school. Since a range of the qualitative interviews in Ghana discuss girls being late to school due to them being involved in various household chores, there seemed to be an emerging link between the issues that made them happy/unhappy and their likelihood of getting these punishments. The literature documents that adolescents in Barbados, Egypt, India, Pakistan, Sudan, Tanzania, and Zimbabwe find punishment painful, made it hate their teachers, and affected their concentration and continued attendance in school for fear of being beaten.²³⁹ Parents also spoke of their children being mistreated in school and felt that it affected their performance.

In one diary, a cohort girl had drawn a child being hit as an adult on her cover page (see Figure 66²⁴⁰ below). The girl had been hit by more than one teacher in school and at home by a parent.

Figure 65: Cover page of the diary of a cohort girl



²³⁷ Singh, R and S. Sarkar (2013) 'Teaching Quality Counts: How Student Outcomes Relate to Quality of Teaching in Private and Public Schools in India'. Working paper 91, Oxford:Young Lives.

²³⁸ Jones, H. and Pells, K. (2016) 'Undermining Learning: Multi-Country Longitudinal Evidence on Corporal Punishment in Schools'. *UNICEF Innocenti Research Brief*.

²³⁹ Gershoff, E.T. (2017) 'School corporal punishment in global perspective: prevalence, outcomes, and efforts at intervention', *Psychology, Health and Medicine*, 22:sup1, 224–239.

²⁴⁰ Please note that the photo has been edited to maintain the anonymity of the respondent.

DP teaching aids

Teachers in all three countries said that DP materials have helped students visualise what they are teaching better, making the topics relatable, their work easier in the classroom, and the teaching much more interactive and engaging for the children. Another key mention was of these videos making it easier for children to comprehend and remember new words and objects that earlier seemed quite abstract. For example, visual aids allow teachers in Kenya to make otherwise complicated and hard to imagine subjects, such as 'digestion in the human body' according to one teacher or viewing 'other countries' far away from Kenya according to another, tangible. A few schools in Ghana also mentioned that these tools were motivating children to speak English because some children in the videos they watch during DP lessons speak in English.

In resource-constrained settings such as the schools visited in Kenya, teachers appreciated the videos as they could not arrange for children to take field visits and they felt that their students would otherwise not get exposure to some of these concepts without the videos. However, in the diaries maintained by students in Nairobi, Machakos, Wajir, Kiambu, and Kajiado, only in Kajiado did we find an explicit mention of children watching videos during their lessons. That said, in some schools students were sitting tests and so it is likely that teachers may not have used video lessons during the day.

However, there were concerns from respondents in all countries that some teaching aids, and videos in particular, are not tailored to the local culture. Their concerns were apparent in their recommendations for how the project could be improved, with a number of teachers suggesting that DP tailor the video content to suit the local context. In Kenya, in almost all schools teachers said that they would prefer the videos to have African or Kenyan references and people. They feel that having non-African people in the video hinders students in relating to material, which was considered 'muzungu' culture or practices. Some teachers felt that the material was not always relevant to the Kenyan syllabus, and did not help them cover what was required in the syllabus. In one school, teachers called for greater cooperation with the Kenya Institute of Curriculum Development and the MoE so DP could develop 'relevant' materials. This suggests that some teachers are not entirely clear of the role of DP materials in supplementing teaching practice, as opposed to replacing classroom teaching. Searching for the appropriate part of the content on the DVD was also difficult for some teachers, who felt that they wasted a lot of time searching for the right content and suggested using flash-drives instead of DVDs. In Ghana, a concern raised by them in some schools was that at times the videos seemed a bit alien to the children because they were from a very different context that was not entirely relevant to them. One teacher went on to say that while the agricultural processes described in some of the videos were very interesting to watch, they were not always relatable for the children as they were not linked to local processes and context. In addition, teachers mentioned that there was a paucity of adequate materials with which to carry out instructions in classes. Thus, even if the video lessons spoke about shapes and spaces, there was a limitation in that materials such as rulers and protractors that are required to put these concepts into action were not available. This lack of materials and textbooks was cited as a key barrier.

Other factors affecting teaching

The quality of teaching is often compromised by contextual limitations such as a shortage of teaching materials (e.g. chalk), poor infrastructure (insufficient desks and chairs), and overcrowding of classes resulting in a high PTR. Infrastructural challenges mean that teachers face difficulties implementing what they have been trained on in DP-2. Teachers constitute part of the population living in the impoverished communities in which DP-2 is operating. As such, although not explored or targeted by DP-2, economic well-being could very well have an impact on the quality of teaching delivered by some teachers. Teacher

motivation, remuneration, and attitudes have implications for performance and the quality of the teaching delivered. These are areas that are not targeted by DP-2 but that do have an impact on the project's intended outcomes.

Summary

- In general, the perception is that the DP training has had a positive impact on teaching.
- The materials provided are considered useful for engaging pupils and making concepts understandable and easier to teach with the support of visual aids.
- Reinforcing evidence from lesson observations, teachers in Kenya and Nigeria have adopted certain components of gender inclusiveness in the classroom, potentially stemming from DLA's gender training in DP-1.
- In line with the lesson observation results, student diaries in Kenya made almost no explicit mention of the use of videos in lessons.
- There were concerns from respondents in Nigeria and Ghana that materials are not adequately localised.
- Teachers reported contextual factors affecting their abilities to implement what they were taught through DP-2, including poor school infrastructure and a shortage of teachers.

In this section, we presented quantitative and qualitative findings to explore the teaching culture practised at schools in the three countries. Teachers generally perceive and value the benefits of DP-2 training and materials and report using them, although it is too early at this baseline stage of the DP-2 evaluation to make definitive statements in this regard. One of the reasons that might discourage some teachers from using DP-2 materials could be because, in some cases, they are reported to not be directly relevant to the local context, and in some instances difficult for students to relate to. For example, one Ghanaian teacher reported that in a lesson about agricultural systems the video contained content depicting rice paddy fields in Bangladesh, which was difficult for students to relate to given the geo-climatic conditions in northern Ghana. According to the teachers interviewed in the qualitative study, they are practising gender-responsive teaching in which they treat girls and boys equally, give them equal opportunities to perform in the classroom, and provide equal support to learn and understand. They also report that thanks to DP-2 teaching aids their teaching is interactive and that children find their lessons more interesting and fun. However, we do not find sufficient evidence from the quantitative findings nor the children's diaries to make definitive statements about the success of these approaches at this baseline stage. In contrast, according to the survey results, there is some evidence of boys being supported more than girls in some cases. Children in their diaries do not mention watching videos except in a few cases. The classroom environment was generally assessed to be safe and socially inclusive but, according to the children's accounts, schools practice corporal punishment; this makes children unhappy and does not help them learn better or think of themselves more highly.

5.3 Community-based attitudes and behaviour change

The DP-2 ToC assumes that community engagement in girls' education will contribute to their increased chances of enrolment, attendance, and overall completion of school. An underlying assumption is that community engagement through the CAP activities, improved teaching practices, and improved learning outcomes of children will positively change community attitudes toward girls' education and increase the value of schooling in the eyes of parents/guardians. As such, the project activities include training of individuals involved in CAP activities on ways to engage, mobilise communities, and create awareness about the importance of girls' education, as well as address barriers to it. This section provides a baseline

assessment of current self-reported and observed attitudes toward girls' education among girls, boys, their parents, teachers, and other community members.

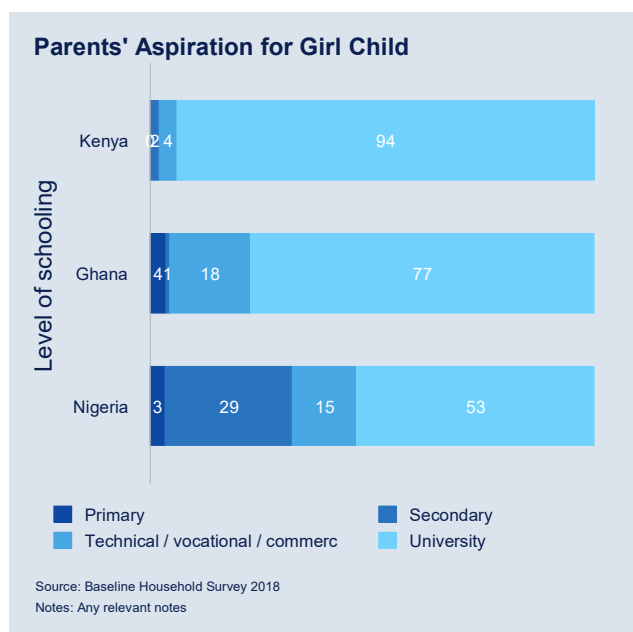
5.3.1 Attitudes of communities, parents, and children to girls' education

Parents and communities

Parents and community members in all three countries have favourable views toward girls' education and positive aspirations for both girls and boys to further their education and attain a career.

Parents/guardians in Kenya are of the opinion that girls who are the *'light of the community'* are those most likely to support their parents and the community. Parents generally express a willingness to support their daughters' education and hope for them to be able to go to university and be successful. Parents/guardians of the cohort girls shared similar views, where 94% of households (95.5% in treatment and 93.4% in control areas) aspire for their daughters to achieve a university-level education (Figure 66) and 86.9% (86.3% in treatment and 87.6% in control areas) report listening to the girl child when making decisions about her education (see Annex 25). Parents generally aspired for their children (both girls and boys) to grow up and have a better life than they did. They want them to have enough money to live comfortably and support them as well. Community leaders report that the attitude toward girls' education within the community has changed for the better, and these changes have been brought about through support from the government (i.e. increase in school resources), various organisations such as World Vision, religious bodies (e.g. churches), community leaders/chiefs, and the involvement of successful school alumni.

Figure 66: Parents' aspirations for girls

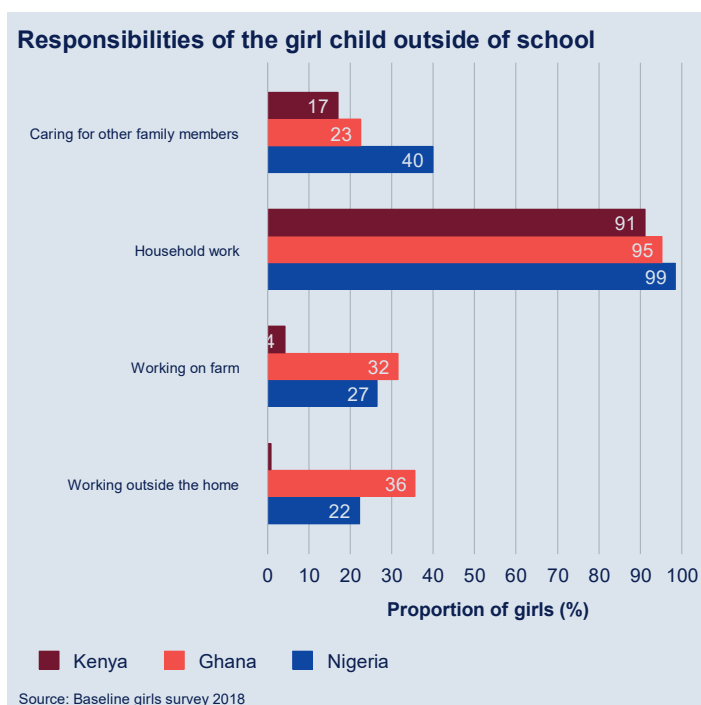


In Nigeria, respondents believed that educating girls would benefit both the family and community as a whole, such that it ensures that parents and others can receive help from their children in reading letters and in other tasks requiring a certain level of formal education. Moreover, children with an education would help community development through employment in sectors such as teaching or hospitals. Parents, teachers, and CAP members interviewed seem to aspire toward children completing their education and advancing to the tertiary level. In the quantitative data, we find slightly over half (53%) of parents/guardians share these views, while 15% and 29% of parents/guardians would like them to complete some technical/vocational and secondary-level education, respectively (Figure 66). Less than half (45.4%) the parents reported listening to the girl when making decisions about her education (43.1% in treatment and 48% in control, statistically significant at the 10% level). Table 29 in Annex 25 gives more detail on this.

In Ghana, most parents expressed that they wanted their daughters to have a better education than they had and to go on to become doctors, nurses, engineers, government officials, and self-employed businesswomen. Some communities believe that it is important to educate girls rather than boys since girls are more likely to stay behind to support their parents while boys relocate to Accra or other big cities. We also observe similar positive views toward girls' education in the quantitative data, where more than three-quarters (77%) of parents/guardians aspire to seeing their girl child attain a university-level education and 18% prefer some level of technical/vocational education (Figure 66). Similarly, about 76% of parents reported listening to the girl when making decisions about her education (76.1% in treatment and 76.7% in control areas). Contrary to the positive views among parents/guardians, some community members report there are still some people within the community that do not understand the full benefits of sending girls to school and feel that girls instead should be engaged in helping within the household. In their view, they felt that the activities run by DP-2 such as the CAP were critical in reaching out to people within the community that do not value girls' education. However, any change in those people's mind-sets would be gradual.

Increasing economic pressure and poverty seems to directly or indirectly have an effect on gender roles and relations within households. Thus, intra-household gender dynamics are slowly changing toward recognizing girls' contribution to alleviating the financial constraints of their families given changes in economic opportunities for boys and girls. Households are the space where individuals both cooperate and compete for resources where girl children are not passive recipients of gender expectations but are full members of the family who are forced (alongside adults) not only to take on additional income-earning tasks while continuing their domestic tasks but also to provide long-term care of their parents. These increasingly important roles for girls can continue raising the importance of girls' education. In addition, parents generally have aspirations to improve their daughters and sons' lives alike, and see education as a means toward better fortunes than they had themselves.

Figure 67: Responsibilities of girls outside of school

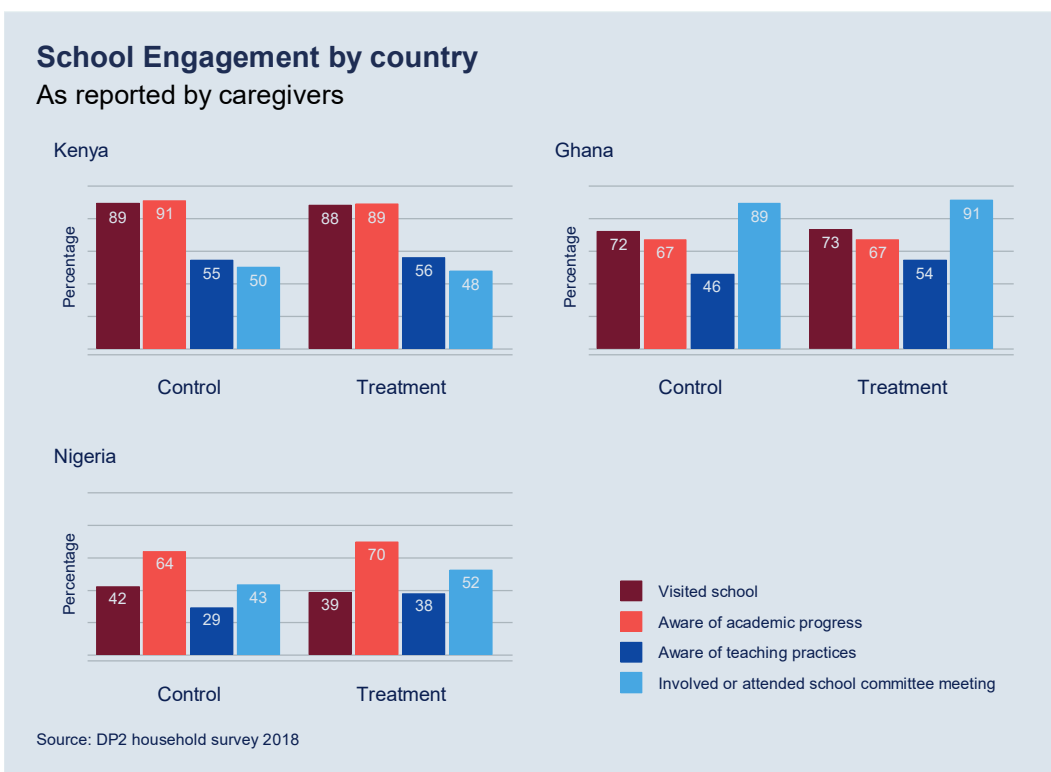


While parents’ views and values around girls’ education were positive across all countries, the high chore burden among girls at the household level seems to have a negative effect on children’s ability to study and perform well in school. About 80% of girls in Ghana and over two-thirds of girls in Nigeria report that, due to duties both inside and outside the household, they lack sufficient time to read. This was less pronounced in Kenya at 13%. We also find through our qualitative interviews with parents in Kenya that parents understood the impact of excessive household work on their children’s ability to study and perform well in school. Girls across the three countries report being responsible for doing household work such as fetching water, cleaning, or cooking. Working on the farm or

engaging in work outside the household to earn money was very common in Ghana and Nigeria, as Figure 67 shows. A high chore burden seems to be a common barrier to learning and transition in Ghana and Nigeria but relatively less of a barrier in Kenya (see Table 15 in Chapter 3).

Parents’ and community engagement and support for children’s education is critical to ensuring children – in particular girls – enrol, attend, learn, and transition through school. Awareness of children’s academic progress in school is high in Kenya at 91% (89% in treatment and 89% in control areas), relative to Nigeria (70% in treatment and 64% in control areas, statistically significant at the 5% level), and Ghana (67% in both treatment and control areas) – see Figure 68. About half the parents/guardians in Kenya (55%) and Ghana (51%) were aware of changes in the teaching practices within their daughter’s schools, but this was lower in Nigeria at 34% (38% in treatment and 29% in control areas, statistically significant at the 1% level). Moreover, a high portion of parents in Kenya (89%) and Ghana (73%) reported having been inside the girls’ school or classroom, but only 40% in Nigeria (see Figure 68 for a further breakdown by treatment and control areas). Across the three countries, parents in Kenya seemed to be more aware of their child’s progress in school and had paid a visit to the school within the past 12 months. However, teachers interviewed in the qualitative study in Kenya felt that parents needed to engage more with schools, especially to follow up on how their child has fared in her/his education. Contrary to the communities and parents’ views that values and perceptions regarding girls’ education have changed, teachers often felt that parents did not consider education to be important, particularly in Wajir.

Figure 68: Parents' engagement in school



Based on the quantitative data, we find that parents/guardians' engagement in school committees or education group meetings is more pronounced in Ghana relative to Kenya and Nigeria – as shown in Figure 68. About 90% of the cohort girls' parents in Ghana report attending or being involved in a school committee meeting in the past school term, compared to 48% (52% in treatment and 44% in control areas, statistically significant at the 1% level) and 49% of parents in Nigeria and Kenya, respectively. Membership of school-level committees was also higher in Ghana, where 37% (40% in treatment and 33% in control areas, statistically significant at the 1% level) of parents reported being a member of a school committee or education group compared to about 7% in Nigeria (7.4% in treatment and 7% in control areas) and 3% in Kenya (the same across both treatment and control areas). Annex 25 provides more information.

In Nigeria, religious leaders (imams) and community leaders are well respected and often seen to have the power to influence change within communities. When it comes to shifting views toward girls' education, these individuals and other key community leaders are seen to be active drivers of change. Respondents reported that during gatherings in mosques or at social events community and religious leaders tend to raise awareness around the importance of school attendance and other school-related issues. Parents believe the community plays a vital role in encouraging students to attend school regularly. For instance, one parent mentioned that community members need to express concern when children are often late for school even in cases when the child is not their own. Schools (i.e. head teachers and teachers) felt that there is buy-in from the community around DP-2, which is demonstrated by how frequently religious and village leaders use religious gatherings (often after Friday prayers) to

raise awareness among parent and encourage children to enrol and attend school as part of the CAP agenda.

Kenya's communities have several leaders who are involved in the community – from the chief and assistant chief to the 'nyumba kumi', village elders and religious leaders. These leaders are well regarded in the community and are responsible for maintaining peace, addressing grievances, and ensuring that the community is safe. Interviews with the chiefs in the communities suggest their interest in education and awareness of the challenges that children in their community face. Community leaders play an important role by forming a link between the parents and the school and have, in some schools, alleviated financial concerns for some students so that they can continue to attend school, helping to raise resources to build or repair school structures and buying books for students.

In Ghana, some of the community members were also PTA/SMC members and seemed to be quite involved in the functioning of the school. Some of the community leaders who were also religious leaders report engaging with parents to convince them to send their children to school while also working with school staff to monitor attendance and implementation of project activities from time to time. In particular, some communities suggested monitoring as a key role, which involved them walking/driving around the community to encourage children who were loitering around in their uniforms to go to school. Most of the community leaders also spoke about community contributions to support the payment of electricity bills for the school, as well as the challenges faced in doing so.

Children's attitudes toward education and boys' toward girls' education

When it comes to children's views of education, our work with boys and girls suggests that attending and performing well in school is an important part of their lives. Boys and girls alike value the part of their life associated with schooling and express a desire to do well. Moreover, boys express the importance of education for girls. During the rich picture exercises in Nigeria girls and boys demonstrated their desire to further their studies. When asked about their aspirations, girls indicated that they would like to complete their schooling and have a career. All the girls interviewed as part of the qualitative study aspire to continue their education up to university level so they can have a professional career such as doctors, teachers, lawyers, newscasters, policewomen, etc. The quantitative data finds that among the cohort girls in Nigeria only 40% (39% in treatment and 42% in control areas) of the girls expressed the desire to go to university provided they face no constraints (see Table 47). Moreover, in Nigeria only 33% (32.8% in treatment and 33.5% in control areas) of girls claimed that they would expect to be studying further after they finished school as opposed to 43% (40.4% in treatment and 44.9% in control areas, statistically significant at the 10% level) who would get married, and 60% (61.5% in treatment and 58.3% in control areas) who would be working (see Table 47). The girls all show some interest in learning numeracy and literacy as demonstrated in the diary entries. In Nigeria, religious commitments seem to take greater precedence, particularly in Islamic schools, as indicated in girls' diaries where they often expressed enthusiasm about being able to read and recite the Quran.

In Ghana, based on the rich picture exercise we conducted with girls, we find that all girls showed eagerness to learn, to read, to answer questions in class, and to perform well. They appreciate it when teachers praise them for their good performance and when they can finish the tasks given to them. Similar thoughts were mentioned by the boys, who felt that the girls were happy if they were able to answer questions asked of them in class or were able to perform well in tests and exams. About 77% of the cohort girls in Ghana reported agreeing/strongly agreeing to feeling very confident answering questions in class, while 46% and 41% of girls reported disagreeing/strongly disagreeing to feeling nervous while doing maths or reading, respectively, in front of others (see Table 47). In some

communities, there was also a mention of winning quiz competitions against boys as being a motivating factor for girls. Both boys and girls perceive the ability to read well in class as an essential factor for a girl's happiness. About 50% (48% in treatment and 52% in control areas) of the cohort girls expressed the desire to pursue a university education provided they face no constraints. However, only 10% (9% in treatment and 11% in control areas) of girls claimed that they would expect to be studying further after they finished school, with the majority of girls indicating they would be working (94%) (see Table 47).

In Kenya, girls were ambitious, eager to learn and participate in school, and took pride in working hard and doing well in class. They aspire to become doctors, engineers, or bank managers and earn enough money to support their family, their siblings, and people in the community who may be in greater need. About 72% (72% in both treatment and control areas) of the cohort girls in Kenya want to complete university-level education, but only 28% of girls in Kenya expect to be studying after school (30% in treatment and 25% in control areas, statistically significant at the 5% level) as 81% expect to start working immediately after (78% in treatment and 84% in control areas, statistically significant at the 1% level). The rich pictures drawn by girls and boys illustrate a significant difference in the perception of girls from the girls' club about themselves and how boys perceive girls (see Figure 69). Even through these differences, we can see that boys and girls equally value their abilities to study at school. In the example below, the two pictures reveal girls are wary and mistrusting of boys, while boys have a negative, pejorative opinion of the girl that they drew.

Table 47: Cohort girls' aspirations and confidence

	Nigeria		Kenya		Ghana	
	Intervention	Control	Intervention	Control	Intervention	Control
Aspirations						
Aspiration to attend university	38.5	42.2	72.1	71.2	47.7	51.8
When you have finished school, what do you expect to be doing?						
Studying	32.8	33.5	30.2**	25.3	9.3	11.4
Working	61.5	58.4	78***	83.6	93.6	94.4
Married	40.4*	44.9	1.7**	3.4	30.8	30.0
Feel very confident answering questions in class						
Strongly disagree	1	1	2.9	3.3	3.7	3.3
Disagree	14	14	8.7	10.0	12.7	13.4
Neither agree nor disagree	2	2	6.7	5.8	6.2	7.1
Agree	61	62	45.3	42.7	39.8	41.8
Strongly agree	21	20	36.5	38.1	37.6	34.4
Feel nervous while reading						
Strongly disagree	7	8	18.5**	22.3	14.8	13.8
Disagree	32	34	49.8	46.9	23.6***	30.2
Neither agree nor disagree	.7*	0	3.4	3.6	2.7	2.2
Agree	46	45	20.4	20.2	30.9	29.9
Strongly agree	14	13	7.9	7.0	28*	24.0
Feel nervous while doing maths						
Strongly disagree	8	10	22.3**	26.0	19.1	16.6
Disagree	33	34	49.0	46.7	25.4***	32.3

	Nigeria		Kenya		Ghana	
	Intervention	Control	Intervention	Control	Intervention	Control
Neither agree nor disagree	1	0	3.4	2.9	2.8	2.7
Agree	45	45	16.7	18.4	31.2*	26.9
Strongly agree	13	11	8.6**	6.0	21.5	21.5

Figure 69: Pictures drawn by girls and boys as part of rich picture exercise

Picture 1: Drawing of Miriam, a fictitious girl in Std. 8 as drawn by a cohort girl in Nairobi.



Picture 2: Drawing of Clausius, a fictitious girl in Std. 8 as drawn by a cohort boy in Nairobi.



Girls drew and discussed a girl²⁴¹ who had combed her hair, wore a uniform or a nice dress with heeled shoes, and often had ribbons or flowers in her hair. In comparison, in the two schools that we conducted rich pictures with boys from the boys' club, they selected a drawing to discuss in which the girl looked unhappy and angry, where her clothes were short and unkempt, and who was struggling with school and had made her parents unhappy at home. It is important to state that not all the boys in the group shared this opinion, but a majority of the boys who participated in the group activity felt this way.

Picture 1: According to the girls in the group, Miriam is beautiful, not selfish, clever, and enjoys school. Her body is 'strong' and her dress is 'descent' and 'does not show her body'. She will grow up to be a dancer, a doctor, or a nurse. Miriam's attitudes toward school and learning are very positive and according to the girls:

- 'She revises with her friends, and when the teacher comes in, she shows her the homework.'
- 'She has been assigned work from class, the others have gone to play, and she will not go to play but will remain in class and revise maths, English, Social, CRE and Science.'
- 'She cannot be disobedient when the teacher tells her to do this she does.'

²⁴¹ As presented in Chapter 2 on methodology, children were participants of the rich picture exercise when they were asked to draw an imaginary girl studying in primary school. Drawings were then used to discuss the children's views on the issues of gender relations with regard to girls' education, general experience of girls at schools, their aspirations for the future, and barriers to their schooling.

- 'She performs well in all subjects.'

Picture 2: According to the boys in the group, Clausius is a schoolgirl who is 'very beautiful' but unhappy and angry. She is 'not healthy' and has 'rickets', 'Kwashiorkor' (edematous malnutrition), and marasmus (undernourishment). The clothes she is wearing are short and 'not for school'. When she grows up, and if she performs well, she can build a better house for her parents. Clausius' attitudes toward school and learning and especially her experience of schooling are not so positive:

- 'She looks like a girl that doesn't go to school because of the clothing.'
- 'She hasn't finished her school work.'
- 'When she is in school she thinks about playing. At school, she will be thinking about swimming.'
- 'She can be good at English, a mathematician and she also goes to church.'
- 'She enjoys it because her teacher can be her mentor or when she grows up she wants to be a teacher, if she wants to be a teacher she observes what the teacher does and if she is a good example she imitates her so that when she is studying, she will remember what her teacher used to do.'

Although the two pictures show depictions of two different girls, it is evident that being able to go to school, to study well, and look well are of paramount importance for girls and boys alike. Boys did not express any view suggesting schooling is not good for girls or that they do less well than boys. Both boys and girls have educational and career aspirations and see schooling as a route to achieving them.

Gendered attitudes in education

When it comes to the performance of boys and girls, the views of parents and community members in Ghana were mixed: some believed girls performed better than boys while others believed the opposite. Parents/community members who believe boys perform better than girls think this is due to the high chore burden that girls face relative to boys and boys therefore having more time to dedicate to their studies at home. Although we do not have data on chore burdens comparing boys and girls in Ghana, Figure 67 demonstrates the different types of tasks that girls are responsible for within the household. On the other hand, in some other communities girls were said to perform better than boys since boys were less serious about their studies, and often missed school because they were playing outside during school hours. In Kenya, teachers believed that girls and boys performed relatively the same, for the most part. In some schools, especially urban schools located in Nairobi and Kiambu, teachers believe that the support that girls have received has resulted in them outperforming boys. They felt that support directed explicitly to female students seems to neglect the needs of boys and makes them less confident in the classroom. In Nigeria, parents did not think there should be any difference in why boys and girls should attend school and their performance in school – and that this would depend on their environment and the support they receive in school to do well. The majority of parents (over 95%) across all three countries seemed to 'strongly agree' and 'agree' with the idea that *a girl is just as likely to use her education as a boy and thought it was worth investing in girls' education even when funds are limited.*

Although parents report a high aspiration for their daughters to complete their education, marriage is nonetheless viewed as the ultimate goal for some parents in Wajir and Nigeria. That said, these same views were not expressed in the quantitative data, where about 16% of parents/guardians in Kenya, 21% in Ghana, and 25% in Nigeria believe it is acceptable for a girl to stay out of school if she is either married or getting married. About 43% and 31% of the cohort girls in Kenya and Ghana reported expecting to get married after they finish school. Less than 5% reported this in Nigeria. In the project target areas across the three countries, it is culturally expected that girls marry upon completing secondary school. Moreover, economic disadvantage results in girls being married off early as this is perceived to alleviate the financial

burden on the family. Essentially, when a girl is married she becomes the economic responsibility of her husband and not of her family. However, as discussed earlier, it can also be suggested that the increasingly important role of girls' economic behaviours in her households' well-being – as dictated by the socioeconomic circumstances people are living under – is likely to change this perceived norm quickly. Given such an evolving context where the old and traditional exist side by side with the new, the role of community engagement in schooling is increasingly important, especially in the case of Nigeria.

5.3.2 CAP and related activities

Individuals involved in CAP activities in Nigeria have succeeded in initiating several school development projects, including ones involving dilapidated buildings, broken chairs, boreholes, water supplies, security installations (burglar-proof bars), the supply of mats, fuelling, and maintenance of generators.

Contributions from community members funded most of these projects. For example, in one school local carpenters volunteered to assist with repairing chairs and bricklaying. In another school, the local security group was mandated to safeguard school equipment. Such measures by community members to ensure schools' upkeep demonstrates a commitment to bettering school conditions, thus confirming the perception that education is considered valuable. Community support is further evidenced by members' assistance with consumables in the school, such as community members volunteering to repair school facilities and purchasing some resources such as chalks. However, these community activities are not always part of CAP as in some communities these are practices that already existed before DP. Moreover, such a commitment is more common in Islamic schools compared to public schools.

Active engagement of schools with the community is one channel through which attitudes toward education are changed. The findings on community engagement are consistent with DP's ToC as well as the literature around the role of community engagement in improving education outcomes. In Nigeria, a teacher noted that the community engagement component of DP-2 is one aspect that distinguishes it from other teacher training programmes offered in the country. Teachers felt the project provided them with better skills and know-how around how to approach and work with community leaders to sensitise and inform communities about the importance of education. They also felt the project has been instrumental in changing attitudes among the community, giving examples such as parents now sending their children to school regularly and the community assisting the school by buying materials (e.g. chalks) and funding repairs. In one community, volunteer teachers were teaching lessons as a form of assistance. Individuals involved in CAP activities were able to corroborate the reports from teachers around community support in the form of finances. One individual who had been through the CAP process stated that 'if you educate a woman you educate a generation'. As already mentioned, parents often indicated that they would like for their children to complete their studies in order for them to be employed and make something of themselves. One imam also noted that community plans have been critical to the process of raising awareness about learning and education within the community. It is not the case, however, that this was always attributed to DP-2 from respondents' perspectives.

In Ghana, more than half of the communities were still to develop a consolidated CAP following DP-2 community workshops. This translated into the community members who were consulted having not only a different understanding of DP activities but also of their role in regard to engaging with the CAP process. While most of them seemed to have received an initial orientation about DP-2, and they were broadly aware of what the project was aiming to do, there was a lesser focus on explicit action plan activities that they had developed. Most members we spoke to were motivated toward strengthening education for girls and seemed aware of the barriers faced by parents in sending their children to school. Further, a couple of communities mentioned monitoring as a key role, which involved them going around the community to encourage children who were out of school to attend. In addition, some community

members spoke about working with parents to encourage them to send their children to school, while also working with school staff to monitor the attendance and implementation of project activities from time to time. Thus, the role of monitoring was also understood and implemented quite differently across the board, and there was less consistency on which level this monitoring needed to be conducted at. Further still, there seemed to be some conflation of what the DP project was doing versus what the CAP was actually meant to be doing. By design, DP-2 does not provide specific mandates as to what the CAP should consist of nor how it should be carried out other than generally promoting girls' and marginalised children's education with a focus on learning, attendance, and transition in particular, as well as recommending a template for their plans and a simple structure to monitor their own progress in implementing these plans.

A common point of what the CAP activities seemed to be focused on was related to the management and ensuring the set-up of the learning centre, the provision of the DP equipment and materials, as well as to work toward ensuring that the DP rooms and materials had adequate equipment and facilities given the student enrolment. There also seemed to be a link between the CAP members and PTA/SMC members, and there was a clear overlap between the CAP membership and PTA membership in most communities. It is worth noting the project intentionally involves PTA and SMC representatives in the community workshops and CAP process. Some of the wealthier urban communities seemed to have more ease in raising contributions, especially from individual benefactors and politicians. Further, another common issue that came up was the payment of electricity bills and community contributions toward those, which in most cases were raised by community members.

As is mentioned above, community members support the school and encourage parents to send their children to school. CAP members and other community leaders counsel parents and encourage religious leaders to support schools as well. Community leaders also try to get political support for the school and reach out to political leaders on behalf of the school when it needs help.

Communities generally reported a positive attitude toward educating their daughters and expressed that better schooling meant more opportunities for them to succeed in their lives and become financially independent. Parents highly value the education of their daughters. Children themselves have high education and career aspirations. However, the degree to which these aspirations and views are put into practice (that is, positive knowledge changing into the positive practice of ensuring girls attend school and continue schooling) cannot be measured at baseline and will be explored at endline. The barriers to schooling were less related to community attitudes but more intertwined with financial constraints around children stepping into their parents' shoes to make their contributions toward their household well-being. As such, children are responsible for doing unpaid work (as well as paid work, as discussed in earlier chapters) and girls are playing an increasingly important role given the current socioeconomic conditions people in the project areas are living under. This changing role is also likely to affect intra-household gender boundaries and make it worth investing in girls in the long run.

5.4 Life skills and girls' self-esteem

DP-2 aims to improve the skills and knowledge of girls primarily through schools choosing to set up a girls' club where mentors are trained to support and engage girls in activities that enable them to generate income, increase their awareness about health, learn new skills, access relevant resources to receive greater support, and link vulnerable girls to other support programmes to increase attendance and retention in school. The life skills component focusses predominantly on those girls engaged in girls' clubs as part of the intervention. A contribution claim of DP-2 is that girls' clubs lead to improved girls'

motivation, self-confidence and life skills which in turn improve their school attendance and learning outcomes. As such, the expected outcome is that girls who participate in the clubs will develop confidence, skills, and attitudes that can enable them to succeed at school and aspire to higher levels of education.

5.4.1 About girls' clubs

Nigeria

The girls' club were generally functional in the six schools that were visited in Nigeria. One school had a functional boys' club. Membership ranges from 24 to 27 and up to 40 pupils, and girls are taxed a token amount of NGN 50–100 as seed capital for the purchase of raw materials for making crafts. It is worth noting that this is not part of the original project design, which promotes including the most marginalised girls in club activities. All schools do not always follow the same selection criteria, which are stipulated by DP. In five of the schools, club members were selected from primary 6 (though DP-2 encourages schools to also select primary 5 girls). The justification is that primary 6 girls are perceived as being in greater need of skills development as they are soon to graduate and leave the school. Thus, the skills taught are regarded as more valuable to them. Membership selection is based on the child's performance, neatness, and punctuality. For the qualitative cohort sample, 15 girls were part of the girls' clubs: seven in primary 5 (five from one school and two from another) and eight girls in primary 6. A mentor at one of the public schools served as a teacher at the school and received DP training. There was a male and a female mentor for the girls' and boys' clubs, respectively. Mentors noted that they do not receive compensation and were selected based on their rapport with the children.

Mentors discussed that the club activities involve teaching girls business skills. A shared opinion among the schools visited is that the girls' club is especially important in facilitating the development of life skills. Although in five schools, club membership was for primary 6 only, meetings are held regularly, and documentation on membership, attendance, and minutes of meetings were observed in three schools. A common challenge across all of the clubs is the lack of sufficient resources and funds to carry out club activities.

Kenya

In discussions with girls' club mentors and girls in Kenya, we collected accounts of girls engaging in several income-generating activities, such as making soaps, beadwork, planting flowers and vegetables on school premises, and sewing. These activities often need contributions from KSH 5 to 20 from the girls to continue these activities, though as with Nigeria it should be noted that this is not a practice encouraged by DP-2 given the focus on marginalised girls. The discussions vary within each group. Mentors also discuss menstrual health and hygiene, cleanliness, HIV, and girls' careers and aspirations. Parents know of these clubs and almost all the parents interviewed, except one, approved of their daughter being a part of this club, as they felt they learned new skills or the clubs helped the children relax. Children did not write about the club in their diaries, though they mentioned being part of the club when asked explicitly during discussions.

Ghana

While all the schools in Ghana had an existing girl club, the level of functioning was quite variable across the schools visited and functioning clubs mostly focused on personal hygiene. In one school the reason for the low levels of functioning was that the leadership of the girls' club had changed recently and the

new patron who had taken over was charged with doing so quite abruptly. Another school reported that the scheduling of the club's activities appeared to be inconsistent, and quite dependent on the level of experience of the patron. On the other hand, another school's club met every fortnight and also performed a drama for the parents at PTA meetings. However, since the club patron was male, there was some hesitation regarding how much the girls could open up about their concerns. A separate club usually met every Friday, and some of the activities they engaged in were fun games, talks on personal hygiene and other subjects, and general counselling sessions.

Girls' club comparison across the countries

Overall, all the schools visited in all three countries had girls' clubs but the nature of their functionality varied, especially in Ghana where some clubs were not at all run well while others were quite active. In Kenya and Nigeria, club members engage in producing a range of hand-made products for sale to generate some money for the club and/or school. They seem to teach girls some life skills, especially manual skills and personal hygiene. However, none of the clubs mentioned using tools such as the 'My Business Kit' in Nigeria and Kenya, and in Ghana these tools were mentioned only a fairly limited number of times.

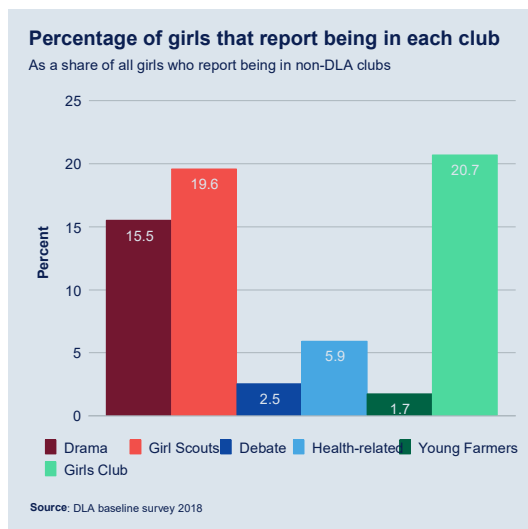
In Nigeria, teachers reported a sense of pride about having the clubs at their schools and competing with other schools. In Kenya, girls' club patrons felt that the clubs had developed the confidence of girls and also motivated them to come to school because they discussed issues such as menstruation and hygiene that had kept girls out of school. A recurring finding across the parent interviews in Ghana was that most parents did not have much idea of what this club was or whether their daughters were members of it. Some parents interviewed in Nigeria were also unaware of the existence of the girls' club. This is explained in part by the fact that mothers (who made up a large proportion of the sample interviewed) are typically not involved in school activities as this is often left to fathers.

Girls' clubs seem to be most active in Nigeria where girls not only generate income by producing goods for sale but also compete in school competitions. The establishment of the club in Nigeria is perceived as a mechanism through which girls are equipped with skills that build self-reliance and ultimately better their economic circumstances. The girls' club is generally accepted and viewed as a means through which girls are able to acquire skills that will be useful to members now and in the future. The outputs of the clubs are perceived as having benefits extending to the school overall and not only among members. Three schools displayed finished products (body cream, bed sheets, perfume, and liquid soaps) that were made by pupils. These items are sold, and the proceeds reinvested into the club. The club activities have helped to build pupil and school self-reliance, and profits raised from selling club products are used to fuel the generators of the learning centres – as reported in two schools. Those clubs are not only equipping girls with the skills and awareness of themselves but also raising the profile of schools and contributing to the school infrastructure. Through the activities of the club, competitions are organised wherein pupils display their finished goods – one of the schools reported coming second at the state level and another came sixth. There is also a sense of pride among the teachers at the outputs of the club. As expressed by one head teacher, *'the club has done the school proud'* because one of the pupils represented the school where finished works were displayed and came sixth at the state level. One of the mentors whose pupil displayed her craft said she is proud of her because she has, on her own, been able to produce a handbag.

While the importance of the role of clubs and committees in schools in Nigeria is pronounced, the findings from the girls' module in the quantitative baseline study show that only 23% of the cohort girls (those in DP schools) are members of the DP girls' club and, of all the sampled girls, just 14% belong to some group (including the DP girls' club). In Kenya, the share of cohort girls in the girls' club is similar (23%),

although over a third of all sampled girls are part of some club or committee. The breakdown of club membership, excluding the DP girls' club, in Kenya is shown below in Figure 70.²⁴² In Ghana, 46% of girls in DP schools report being members of the DP girls' club and almost a third of all sampled girls are involved in some club or committee.

Figure 70: Kenya - Percentage of girls that report being in each club



In summary, girls' clubs in all three countries offer the girls a space to use and develop their manual skills, raise their understanding and awareness of issues around personal hygiene, which may be a taboo topic in their homes, and provide them with a chance to increase their confidence and own reputation among others. Although we did not find any literature on self-efficacy *per se* in relation to girls' clubs, we can reasonably suggest that the types of clubs that are run and functioning in our sample could potentially increase/improve girls' self-efficacy. However, there is a risk that the most marginalised groups of girls – i.e. those with multiple drivers of marginalisation – would be left behind given the approach to the membership of such clubs where preference is given to girls meeting a certain profile, i.e. able to contribute to the materials and doing well academically. This will lead to more marginalised girls being excluded from the project and not benefiting from it equally to their counterparts.

5.5 Recommendations on maintenance of intermediate outcomes post-baseline

Attendance

Attendance remains a crucial component of the programme ToC, and as such we recommend that this is maintained as an intermediate outcome indicator following the baseline. As we have noted, attendance-keeping practices are not always regular across the three countries but particularly in Nigeria. Currently the DLA monitors this activity on the basis of interviews with head teachers regarding their perceptions of changes in attendance. Given the importance of attendance as a causal link in the programme ToC, we recommend that the programme pays specific attention to highlighting the importance of attendance-keeping practice, and specifically monitors schools in terms of their performance on record keeping.

²⁴² Many girls reported being members of clubs or committees, but did not specify the type. This is why the total is not 100%.

Attendance target setting

Currently, rates of attendance in Ghana and Kenya are above 90%. As such, we do not recommend setting targets other than to maintain the current rate of attendance. In Nigeria, attendance is lower at 80% for the treatment group. As such, we recommend a target of 85% to be achieved by the endline round of evaluation, which is representative of a 0.25 standard deviation increase.

Quality of teaching

Quality of teaching also remains a crucial component of the programme ToC, and as such we recommend that this is maintained as an intermediate outcome indicator following the baseline round of research. However, we would suggest *quality of teaching* is a rather broad indicator, particularly as it is currently defined in the DLA MEL framework document – to be *monitored through the testing of student learning gains*. While one would certainly think that better trained teachers would lead to improvements in learning gains, learning gains are a function of a number of dimensions.

Quality of teaching target setting

As such, we would recommend that this indicator be further refined to not only capture teacher quality but also to capture the different aspects of teacher quality the programme is focusing on through the training and mentoring. Such an approach would provide greater nuance in understanding not only whether or not a teacher is effective but why a teacher is effective or not.

These indicators have been tailored to the specific teacher training modules implemented by DP-2. Given the limited evidence available globally on the impact of teacher training programmes on these specific indicators (and indeed our analysis of the programme ToC²⁴³ suggests that the evidence to date is mixed), we do not suggest a specific target as this would be rather arbitrary. Rather, in each case we suggest that the DLA should demonstrate improvements at each round of evaluation:

- Increased proportion of teachers who meet to a high standard all classroom management techniques (see Section 5.2.2).
- Increased proportion of teachers who meet to a high standard at least two numeracy/literacy teaching approaches (see Sections 5.2.5 and 5.2.6).²⁴⁴
- Increased proportion of teachers who meet to a high standard at least one assessment strategy (see Section 5.2.4).²⁴⁵

Attitudes and perceptions

Changing attitudes and perceptions is a crucial component of the programme, particularly as it relates to the sustainability of DP-2 activities. It is expected that by fostering changes to attitudes to girls' education communities and schools will be more willing to consider and address the barriers girls face. Currently, the indicator is qualitative in nature and we recommend that it should be maintained as such given that

²⁴³ See Section 1.2.

²⁴⁴ We do not recommend meeting all numeracy/literacy teaching approaches as it is not necessary that a teacher should apply all approaches in a single lesson.

²⁴⁵ We do not recommend meeting all assessment approaches as again it is not necessary that a teacher should apply all approaches in a single lesson.

attitudes and perceptions are contextual. We recommend maintaining this indicator following the baseline round of research.

Attitudes and perceptions target setting

The programme ToC is clear that schools do not exist in isolation and that students' performance at school is affected by factors outside the school. In particular, it is affected by wider community attitudes and the perceptions of a range of stakeholders. As such, we recommend the following qualitative indicators be considered to track progress against this intermediate outcome.

- Evidence of repeated community action planning processes.
- Evidence of concrete actions taken by communities to support DP-2 or girls' education.
- Improving community leaders' perceptions of girls' education.
- Improving parents' perceptions of girls' education.
- Improving boys' perceptions of girls' education.

Life skills and self-esteem

A contribution claim of DP-2 is that improvements in life skills and confidence will lead in turn to improvements in school attendance and learning outcomes. As such, we would recommend that this indicator is maintained following the baseline round of research. The indicator is currently qualitative in nature, which we believe is appropriate. However, while girls' clubs are in general given the freedom to focus on activities of interest to specific schools and club members, DP-2 may want to tailor the indicator so that it captures expected outcomes emanating from exposure to the MBW Curriculum.

Life skills and self-esteem target setting

- Evidence of the establishment of girls' clubs in DP-2 schools.
- Increasing proportions of girls enrolled in girls' clubs.
- Girls' club members' perceptions of the perceived value of girls' clubs in promoting life skills.²⁴⁶

²⁴⁶ It is our understanding that the MBW Curriculum, at the time of writing, is still being tailored to DP-2 and is as yet to be implemented. We would recommend that this indicator be further tailored to be more closely aligned to specific skills promoted by this curriculum.

6. Conclusion and recommendations

6.1 Conclusions

Profile of project beneficiaries and barriers to learning and transitions

DP-2 targets marginalised groups with a long history of exclusion. All DP-2 schools include schools in areas with low local economic development, with limited educational resources, and with low educational capacity. Therefore, according to DP-2 all girls (and boys) attending schools targeted by DP-2 are considered to be marginalised. Most girls are aged between nine and 13 years, with girls in Ghana tending to be slightly older than girls in Nigeria and Kenya. The proportion of girls in the sample that have a disability is slightly higher than national or regional averages for similar age groups reported elsewhere. Given that the number of girls with disabilities in the sample is small in absolute terms, we are not able to meaningfully report on the barriers to learning and transition that girls with disabilities may face in particular.

Our analysis allows us to conclude that the main drivers of girls' educational marginalisation in all three countries are poverty and extreme poverty and the remote and rural locations where these children live. The country-specific drivers include inadequate school infrastructure, lack of teachers, and overcrowded classes in Nigeria, lack of school space in Ghana, lack of qualified teachers in non-formal schools and the semi-arid/arid regions of Kenya, as well as unsafe journeys to school. The common barriers to girls' education tend to prevail for all the project outcomes while the country-specific barriers are likely to vary from outcome to outcome.

We also find evidence of gendered barriers to education, which varied across context. This included the lack of separate toilets for boys and girls observed in some schools in Nigeria and the lack of female teachers in some schools in Nigeria and Ghana. In Ghana and Kenya, we found that menstruation tended to be an important barrier, with schools reporting that girls often missed school if they did not have underwear or sanitary napkins, preventing them from both attending school and participating in class once they were in school. In Kenya, some schools had tried to respond by stocking extra underwear or sanitary towels, but often girls did not have the money to buy these items. Furthermore, in Kenya a factor that hindered girls from attending school was the health of family members, with girls missing school if they were required to look after family members.

Given these drivers of marginalisation, our analysis shows that there are specific groups of children who are at more risk of not having equal chances to stay and succeed at school. These 'at-risk' groups are those who have multiple characteristics of marginalisation, given that most of the DP-2 child population manage to attend and transition despite their relatively poor standards of living.

- In particular, in the case of Nigeria children living in extreme poverty, households in rural locations, orphaned children, and children living with single parents are more likely to attend schools with inadequate facilities, learn in overcrowded classrooms, and live further from secondary schools. Also, girls are more likely to be helping with agricultural work, a family business, or other work outside the home.
- In Kenya, girls from poor households and living in semi-arid/arid regions are more likely to attend schools with poorer facilities, learn in overcrowded classrooms, and live further from the nearest secondary school. Moreover, girls living in informal settlements, and particularly those attending

non-formal schools where the quality of teaching is a big issue, are more likely to have large numbers of un- or underqualified teachers and high teacher turnover within their schools.

- In Ghana, children living in extreme poverty, children living with single parents, and children with disabilities are more likely to learn in overcrowded classrooms, live further from secondary schools, and be helping with agricultural work, a family business, or other work outside the home. These ‘at-risk’ children require special attention from DP-2 to help them have equal chances to attend school and transition.

Outcome indicators

Learning

Literacy and numeracy learning levels differ by country.

- **English literacy levels are extremely low in Nigeria.** The vast majority of pupils in Nigeria are not able to read in English. That said, that English is not the LOI in most schools, that teachers feel less comfortable speaking English, and that pupils get low exposure to English at home are factors that are likely to contribute to this.
- **The majority of pupils in Ghana are not yet able to read with comprehension.** Approximately 60% of pupils are reading at a speed of less than 45 WPM, which international research has suggested is the lower boundary of the speed at which pupils begin to read with comprehension. Similarly, 60% of pupils cannot answer a single comprehension question based on the text read.
- **English literacy outcomes are the highest in Kenya.** The majority of pupils can read at speeds that are generally considered necessary for reading with comprehension. Despite this, only 9% of pupils are proficient in reading comprehension, meaning they score 81% or higher on the comprehension questions. One of the explanations for this could be that some schools in Kenya have ‘book clubs’ that might boost their reading skills and that these children speak English at home.
- **Numeracy outcomes in Nigeria are generally low, but there are a range of ability levels.** A fifth of pupils are not able to orally identify a one-digit number and half the pupils are not able to answer a simple one-digit subtraction question.
- **Numeracy outcomes are substantially higher in Ghana and Kenya.** Pupils in Ghana and Kenya perform well on procedural tasks, but less well on conceptual numeracy tasks such as number pattern recognition and solving word problems. The majority of pupils cannot yet perform advanced number operations.

These findings imply that pupils across the three countries are not performing at the level expected by the curriculum. This is mainly an issue in relation to English literacy for Ghana and Nigeria, as well as numeracy for Nigeria. The fact that Nigeria has poor results in both skills areas can be partly explained by the poor command of English among children, their teachers, and parents. Doing poorly at school and ultimately at exams could partially explain why half of Nigerian children do not transition to JSS. Until the language issue is resolved, we assume that the current baseline performances of children in numeracy and literacy are unlikely to progress despite investments in the training of teachers in Nigeria. Pupils who are lacking the foundational building blocks for literacy and numeracy are unlikely to improve if teachers continue to focus on the content that is expected by the curriculum. The remedial classes that DP-2 is incorporating are likely to be particularly relevant in this regard, but they may not be sufficient if the majority of pupils are not performing at expected levels. DP-2 will also need to

consider how to tailor the literacy and numeracy training to what pupils (and teachers) know, which is now a core focus of teacher training under DP-2.

Perceptions of differences by gender

The performance of girls and boys in numeracy and literacy, according to parents and teachers, vary from one country to another.

- The general perception among respondents in Nigeria is that girls perform better than boys. The reasoning is that boys are often 'playful' while girls are dedicated and have higher attendance rates. In Nigeria, the main prevalent belief is that girls should study only until they complete secondary school and get married.
- When discussing children's performance, the responses were quite mixed in Ghana. Some parents and communities mentioned that girls performed better than boys, while some stated that boys did better. Teachers believe that the support that girls have received has resulted in them performing better than boys, but teachers, as well as parents, suggest that girls are often busier with household chores in comparison to boys, who have more time to study.
- In Kenya, teachers suggest that boys are lagging behind academically and need more attention than girls. Some other gendered barriers to learning outcomes are early pregnancy and menstruation, which affect girls' attendance and performance in the classroom. In all three countries, teachers suggest boys perform better in mathematics while girls do better with languages.

We have seen in earlier chapters that all the countries demonstrate relatively high rates of attendance and transition, but this has not translated yet to good performance on learning outcomes. In other words, the majority of the children of the marginalised population are attending schools, as well as progressing through primary school, and then transitioning to secondary school (though rates of transition to JSS are lower in Nigeria).

However, good attendance does not automatically lead to good learning outcomes. The children at most risk of having low numeracy and literacy scores, according to our analysis, are those living in extreme poverty. From our earlier findings, we know that children living in extreme poverty tend to live in remote and rural areas where schools tend to have poor infrastructure and be a long distance away from one another. It would not be unreasonable to assume that these schools are likely to have less-qualified teachers and suffer from a range of other misfortunes associated with the school, teacher, and household characteristics. As a result, there is a group of children among the marginalised population who are hard to reach.

DP-2 assumes that teacher training and educational media, remedial classes, girls' clubs, and CAP activities will directly or indirectly lead to better learning outcomes. However, there is evidence (see Chapter 1) to suggest that this is not a straightforward process. In particular, teacher training does not automatically transform into better learning outcomes given a range of contextual factors hindering this process, including the English language issue, class sizes, teacher turnover, and lack of teachers in Nigeria, lack of school space in Ghana, and hungry children in Kenya, to mention just a few pertinent factors. The contextual barriers to effective teacher training can particularly hit those hard-to-reach marginalised groups. Moreover, there is no guarantee that marginalised girls would enrol in girls' clubs since they do not meet the ordinary profile of club members. Also, we can assume that parents and community members in impoverished settlements are poorly educated and have less bargaining power in their respective communities. The inequality in social status relative to head teachers may, therefore, limit

their capacity to hold their schools accountable. This could mean that these communities are not in a good position to develop effective CAPs and act in the interest of girls in most need. Therefore, it is reasonable to suggest that girls in the most marginalised households facing multiple barriers to their education and suffering from multiple drivers of marginalisation would not be able to benefit from DP-2 as much as their counterparts who are less marginalised.

Self-efficacy

We find that girls' self-efficacy is setting based, meaning it is expressed in two main settings – school and home. It is clear that girls wish to succeed in both settings and do well as pupils and daughters and possess the skills required to do so. It is also clear that their judgement of their own capabilities and ability to act on these capabilities can be hindered and promoted by teachers, parents, and boys (alongside others including siblings, friends, etc.). Therefore, although the concept of self-efficacy presupposes it being constructed by the 'self', this construction is done through the prism of others' attitudes to and relationships with the girls. This suggests that self-efficacy is dependent on the context and is individual but at the same time collective in the way that girls sharing similar contexts could have self-efficacy of a shared nature. Thus, we suggest that self-efficacy is affected by the drivers of marginalisation and ultimately informs girls' abilities to attend, retain, and successfully transition. Girls from extremely marginalised areas could have lower self-efficacy and be prone to multiple barriers for their education. GSE scores across all three countries and between treatment and control groups are relatively similar, at between 60 and 70 on a scale that runs from 0 to 100. There is no statistically significant difference in mean self-efficacy scores between those in the treatment and control group, for all countries.

Transition

The baseline transition rate for all three countries is 100% since the evaluation has taken a joint sample approach where all cohort girls are selected from within schools. In Nigeria and Ghana, the key transition points are within primary school, i.e. primary 5 to 6, and from primary school to JSS, i.e. primary 6 to JSS-1. Girls that transition to non-formal education or technical, vocational, or employment training after primary 6 will be considered as successfully transitioned. In Kenya, the transition points are all within primary school, i.e. primary 5 to 6 and primary 6 to 7. Successful transition in Kenya will only be considered for girls that remain within the school or formal education.

The primary completion rates are mixed across the countries according to secondary data. Ghana's rate is 99% (ESPR 2015), Kenya's is 77.7% (MoST 2014), and Nigeria's is 96% (ASCR 2016/17). Transition rates from primary 6 to JSS-1 in Ghana and Nigeria were 93% (UIS 2016) and 47% (ASCR 2016/17). With the exception of Nigeria, both primary completion and transition rates show that most children manage to transition regardless of their level of marginalisation and the barriers to their education. However, from our analysis in Chapter 3 we know that there are specific groups of girls in each country who are likely to struggle to get to school regularly and are at risk of dropping out. In Nigeria, these children are those living in extreme poverty, in households in rural locations, who are orphaned, and those living with single parents. In Kenya, the most at-risk children live in poverty, are from nomadic and pastoralist communities, and live in informal settlements (particularly those attending non-formal schools). In Ghana, key subgroups targeted by DP-2 include children living in extreme poverty, children living with single parents, and children with disabilities. These profiles of DP-2 target child population could represent those children who struggle transiting due to a range of barriers.

The biggest and most common barrier to transition is reported to be poverty and parents thus struggling to pay school-related expenses in all three countries. Other contributing factors to children's transition and particularly girls' could be early marriage (in Ghana and Nigeria particularly), relocation/migration (across the three countries, particularly in Ghana and Wajir in Kenya), a handful of parents not valuing girls' education and preferring their daughters to marry before they get 'old' (in Nigeria and Wajir), distance (in Nigeria), and unsafe journeys to school and pregnancy (in Kenya). In addition, older girls might find it difficult to socialise within a new environment when they enter JSS, generally being intimidated and having lower self-efficacy. However, this argument is proven wrong in Ghana where the transition rates are high despite the fact that girls in Ghana tend to be slightly older than girls in Nigeria and Kenya. This can be explained by the fact that girls in Ghana tend to start school later as a norm rather than an exception and therefore older girls are not particularly disadvantaged.

We can conclude that there are individual barriers to girls' transition to the secondary school and within primary school, some of which are common across the countries and some of which are country specific. Some of these factors such as poverty are issues that DP-2 cannot address and, therefore, the programme is unlikely to change the underlying factors of dropping out, absenteeism, and ultimately poor learning outcomes. Indeed, these barriers are particularly hard to address for those households who suffer from multiple drivers of marginalisation in which originally separate barriers become a joint magnitude force that is considerably harder to address.

Sustainability

The sustainability strategy for DP-2 has a heavy focus on the school and community level in terms of encouraging support for and ultimately ownership of project activities at this level, which includes the generation of resources to ensure the continuation of project activities. At the same time, DP-2 recognises the need to support change at grassroots level with government mainstreaming of activities to achieve systemic change, which it hopes to achieve through direct engagement with MoEs at different levels and by involving MoE staff in project planning and implementation.

At the baseline stage of the evaluation, we find that across the three countries there have been varying degrees of success in the mobilisation of communities. Nigeria appears the most well advanced in this regard and the baseline findings suggest that the CAP process is well valued and some communities have demonstrated a capacity to mobilise resources that address the barriers to education. We find similar patterns in Kenya as well as in Ghana, though to a lesser degree. It is also worth noting that the final evaluation of DP-1 suggested that there was some evidence to suggest that the CAP process had had some success in mobilising resources. Indeed, DLA's own monitoring of DP-1 suggests that, on average over the three countries, just under 60% of CAPs had been implemented at least in part, with interventions including support to school infrastructure, funding to secure learning centres, and support to marginalised children. However, securing of funds at this level remains a concern particularly for more marginalised communities.

At the level of the school, DP-2 is providing support to schools to develop sustainability plans for the continuation of project activities. Again, in this case Nigeria seems to be the most advanced in terms of the evidence the baseline qualitative research found against the development of sustainability plans, followed by Kenya and then Ghana. At school level, a key threat to the sustainability of the programme remains the high rates of teacher turnover (e.g. the final evaluation report for DP-1 noted that in Nigeria about 59% of DP-trained teachers had transferred to other schools in the year prior to the final round of research). DP-2's approach to mitigating this is through intensive support to both resource teachers as

well as local MoE staff who have been trained by the project. However, this does mean that the project is reliant on several key individuals: unfortunately, in reality the resource teachers trained by the project may also transfer to other schools, while local MoE staff may also leave or transfer elsewhere, meaning that their support is under threat until this training has been internalised in in-service training by the MoE.

At the level of the system, DP-2 is active in engaging with the MoE at different levels. DP-2 has engaged at the relevant national or sub-national levels in all three countries. In Nigeria, an MoU has been signed with the Kano State SUBEB that perhaps makes activities at this level the most robust in comparison to, for example, in Kenya where letters of encouragement and authorisation have been provided at the national level but MoUs have been signed with individual schools. DP-2 assumes that the support provided by the MoE will not require any additional resources, and that local MoE staff will be able to carry out teacher training and coaching as part of their regular monitoring and school visits. However, it is worth further interrogating this assumption, and this will certainly be carried out as part of this evaluation, given the findings of the DP-1 final evaluation report that funding at this level remained a concern, particularly when there are multiple initiatives that compete for local MoE staff time – not to mention that the qualitative research conducted for this baseline round of research also suggests this remains a concern. To achieve the higher scores against sustainability at this level, DP-2 will need to work toward the regularisation of MoE support into education sector strategies and budgets. It is in this regard that DFID should consider providing additional support to DP-2 given its access at these levels, and given that it would have the ability to lobby the relevant national or sub-national governments on behalf of multiple GEC-T projects.

Intermediate outcomes

Attendance

Overall attendance rates at baseline are relatively high across the three countries – over 90% for Ghana and Kenya and 81% for Nigeria. The attendance rates at baseline are very encouraging but some girls occasionally miss school, come late, or are sent back home for not paying their fees on time. **Attendance-keeping practices seem to be relatively good in Ghana, and somewhat good in Kenya, but there are irregularities in the way teachers keep records of attendance on a daily basis. However, there are significant concerns in Nigeria overall.** Therefore, we would suggest applying some caution in the interpretation of the baseline attendance levels. In light of these concerns, and the fact that attendance is a key intermediate outcome indicator for the project, we would strongly encourage DLA and DP-2 partners to work closely with schools through their monitoring visits to encourage and monitor attendance-keeping practices, particularly in Nigeria.

Regarding barriers to attendance, we suggest that factors affecting school attendance are complex and deeply dependent on the marginalisation characteristics of households. The barriers to schooling in all three countries were less related to community attitudes and more intertwined with financial constraints such as the ability to buy school supplies, a necessity to do paid and unpaid work to improve family well-being, and specific seasonal environmental factors (droughts and floods) that prevent children from attending school regularly. Communities and parents in all three countries generally reported a positive attitude toward educating their daughters and expressed that better schooling meant more opportunities for them to succeed in their lives and become financially independent. In addition to these common barriers to attendance, we find some country-specific constraining factors affecting girls' ability to attend schools regularly. These are: menstruation and hunger in Ghana and Kenya; illness and caring for family members in Kenya; children in adopted families being required to look after family members in Ghana; and religious holidays in Nigeria. Girls reported having more work than boys in

Ghana and they tend to work before school and come to school late. In Kenya, girls and boys tend to do gendered tasks, such that boys complete more physical work outside their houses and therefore end up being away from home and missing school for a longer period than girls.

Attendance as a project outcome is assumed to be achieved through all the three causal pathways, whereby teacher training and educational media, girls' clubs, and CAPs are supposed to better school attendance. However, based on the literature review in Chapter 1 we find that the causal links between the attendance outcome and teacher training and girls' clubs have a weak evidence base, although community involvement is found to have promising potential. We, therefore, assume it is likely that the role and involvement of community leaders in monitoring girls' attendance and contributing to alleviating some of the financial stresses parents and schools face (e.g. supporting the school with purchasing certain consumables and contributing financially) would be able to solve some economic constraints for some parents, though it is unlikely to create a long-term solution for either students or schools. However, communities in particularly marginalised areas may not be effective in working with schools on an equal footing given the lower level of education of parents and community members, more impoverished lifestyles, less active ties already existing between community and school, etc. Therefore, we suggest that these extremely marginalised communities are less likely to benefit from the CAP initiative and their girls may still lag behind in attending school.

Teaching quality

Teachers across the three countries were able to manage the classroom effectively. There were minimal disruptions from pupils and they gave attention and support evenly to both boys and girls. The classroom atmosphere was mostly calm and supportive, although it could be argued that lessons could be improved with less silence. Although rarely observed directly, children often reported the use of corporal punishment, which may account for much of the calm and quiet atmosphere in the classroom. The use of physical violence for discipline seems to be a well-established norm in many schools, and we assume that classroom management benefits from a teacher having this dominant authority in the classroom. Teachers usually gave equal attention and support to boys and girls. This is in accordance with the teachers' testimonies that they have adopted certain components of gender inclusiveness in the classroom, such as encouraging equal participation in all activities for both girls and boys (class presentations, group leaders, etc.), grouping boys and girls together. There were some differences between treatment and control schools, but these vary by country. Better-qualified teachers achieved better scores in this domain than less-qualified teachers.

Classroom environments did not support the teaching and learning of numeracy and literacy. Very few classrooms had work by students displayed on the wall or teaching and learning materials that support literacy and numeracy. However, the classroom environment was generally assessed to be safe and socially inclusive, although there was a small amount of evidence of boys being supported more than girls in some classes. In contrast, children report being physically disciplined for coming late to school, making noise, not listening to their teacher's instructions, or not completing their work. We suggest, based on the literature, that teachers 'normalising' punishment can increase the chances of a child becoming physically aggressive toward other children, especially girls, and therefore affect their desire to come to school and ability to do well.

Teaching is very much led from the front of the classroom, and the use of the eight numeracy teaching and learning approaches and strategies that DP-2 numeracy training will focus on is limited at baseline among the teachers observed. Teachers in Kenya and Nigeria were more likely to

display enthusiasm for the subject and encourage a can-do attitude relative to Ghana. This was partly expressed through their demeanour, but more often through praise and encouragement. In Ghana, the approaches/strategies selected by teachers to teach the subject or particular lesson were most appropriate, whereas in Kenya and Nigeria the selection of approaches/strategies is not in line with what we would consider optimal. **Different forms of numeracy assessment strategies were employed in all three countries.** In Kenya, supportive questioning and checking pupils' knowledge during the lessons and pupils' mastery at the end of the lesson were all fairly common, occurring in 65–70% of the lessons. In Nigeria and Ghana, supportive questioning and closed- and open-ended questions were the most common assessment methods. Checking pupils' understanding during the lesson and mastery at the end occurred in just under half of the lessons observed. Use of quizzes and other assessment strategies were rare across all three countries. The assessment strategies used in treatment lessons were similar to those used in control lessons. In Kenya, lessons in Nairobi used supportive questioning more often than those in other counties. There is some evidence from Kenya that the assessment strategies used are correlated with teacher characteristics and class size.

Teachers in all three countries reported using the DP video materials, which, according to them, have helped students visualise what they are teaching better, making the topics relatable, their work more manageable in the classroom, and teaching much more interactive and engaging for the children. However, in the diaries maintained by students only a few children explicitly mentioned watching videos during their lessons. Teachers find the DP videos to be an effective aid to both teaching and learning within the classroom. However, they felt the videos were not tailored to the local context and syllabus in the three countries.

Use of methods to teach foundational literacy skills and comprehension strategies were very limited. Teachers very rarely used any of the 15 literacy teaching and learning approaches that DP-2 literacy training will focus on. The only approach that was used in the majority of lessons in all three countries was giving pupils opportunities to speak and listen to the teacher and pupils, largely through front-led question and answer sessions. In contrast, teachers reported, during the qualitative baseline, that DP training has improved lesson delivery and classroom management skills (specifically the use of techniques to keep the children's attention, control noise, and reduce loitering). Teachers in Kenya also appreciate the DP training and believe that it has improved teaching and learning practice. They suggest that training provided by DP, especially in English, helped them develop their knowledge and confidence in delivering their lessons.

Patterns of teaching and learning approaches were similar in treatment schools to control schools in the three countries. Teaching and learning approaches do not vary significantly depending on teacher characteristics or class size. The most common literacy assessment strategies employed by teachers are supportive questioning and closed- and open-ended questions, which were used in about 70% of lessons overall. In about half of lessons, teachers made an effort to check pupils' understanding during and at the end of the lesson. There were some small differences between the assessment strategies used in treatment schools and those used in controls schools in Kenya and Nigeria.

The quality of teaching is often affected by contextual limitations such as the shortage of teaching materials, inadequate infrastructure, and overcrowding of classes. As we found, Nigeria tends to have more school-based issues such as teacher shortages, teacher turnover, oversized classes, poor school infrastructure, and a poor command of the English language, all factors that affect teaching quality. In Kenya, school infrastructure is not an issue relative to the two countries but, as suggested earlier, non-formal schools do not have adequately qualified teachers. Ghana struggles with lack of space at school and lack of reliable electricity. Also, school leadership, teacher motivation, remuneration levels, and

teacher absenteeism and lateness all have implications for the quality of teaching delivered that are not directly targeted by DP-2 and have not been covered in this report.

The DP-2 ToC assumes that improving the quality of education will improve performance and encourage more girls and families to invest in schools. At the baseline level, we have yet to see any evidence in support of this assumption. From the literature discussed earlier, we know that teacher training and educational videos can lead to better learning outcomes, but there is currently no evidence found in support of such interventions also improving school attendance. What we observe from our findings is that teaching quality varies from country to country but is worse in Nigeria. Some of the teaching practices – e.g. corporal punishment and lack of adequate literacy and numeracy teaching approaches – are more likely to affect the most at-risk groups of the marginalised child population.

Community-based attitudes and behaviour change

Parents and community members in all three countries have favourable views toward girls' education and positive aspirations for both girls and boys to further their education and attain a career. In Kenya and Ghana, a very high portion of parents expressed a desire for their daughters to attain a tertiary-level education relative to parents in Nigeria, who seemed satisfied with their daughters completing secondary education or some form of vocational/technical training. Also, we find that both boys and girls feel that attending and performing well in school is an important part of their lives. In Ghana and Nigeria, both boys and girls had positive views about each other and the importance of education for both. On the contrary, in Kenya we find some biased views among boys toward girls' education. It is worth noting here that the qualitative baseline took place in well-performing schools and therefore we are unaware of whether or not more marginalised communities would have different views.

While there were positive attitudes toward education for both boys and girls, the barriers to schooling were less related to community attitudes and more intertwined with financial constraints resulting in children stepping into their parents' shoes to contribute toward household well-being. As such, children are responsible for engaging in both paid and unpaid work to support their families, and girls are playing an increasingly important role given the current socioeconomic conditions they are living under. Even though the chore burden for boys was not explored as part of this study, we do find some evidence that boys tend to have responsibilities helping on the farm or engaging in income-generating activities to support their families and this does also affect their ability to learn and attend school.

The engagement and involvement of parents or household members in school committees or education group meetings is more pronounced in Ghana relative to Kenya and Nigeria. Also, membership in school-level committees was also higher in Ghana relative to the other two countries, where membership levels were very minimal. Religious, community, and village leaders/elders are well respected and have strong influence in and around the communities they serve. These individuals seem to have an interest in and awareness of the barriers to education within their communities and engage in some capacity with both parents and schools to raise awareness and address some barriers (e.g. alleviating financial constraints, monitoring attendance, etc.). However, the situation could be different in remote and rural areas living in extreme poverty, including those in non-formal settlements where community engagement in children's education may take different forms. Parents in pastoral communities are also likely to be unable to be involved in community and school committees and therefore more likely to be left behind.

The advancement and implementation of CAPs varies by country and Nigerian communities have more advanced CAPs than their counterparts in Kenya and Ghana. This could be the case because CAPs are particularly active in these Nigerian communities that surround well-performing schools. Although we found that the engagement and involvement of parents in school committees or education group meetings is more pronounced in Ghana, Ghanaian CAPs were hardly developed and, moreover, CAP members were not always aware of what was required from them. CAPs in Nigeria are reported to have made some progress in raising the awareness of community members about girls' education, offering some financial support to schools and changing some attitudes (although these achievements are not solely attributable to DP-2). Some Ghanaian CAPs were involved in monitoring children's school attendance, ensuring the set-up of the learning centre and that the DLA rooms and materials had adequate equipment and facilities. In Kenya, CAP members were responsible for ensuring that teachers carried out their teaching responsibilities that children attended school, and that parents ensured that their children go to school. They also helped the school secure the TV and other materials provided to the school. Securing the DP-2 equipment seems to be a specific DP-2 activity that CAPs engage in while the other ways of supporting schools and working with them overlap with the activities of other community and school committees. The communities visited by the qualitative team seem to have already had reasonably developed community and school collaborations that DP-2 CAPs could build on. However, as we suggested earlier, the situation could be different in extremely marginalised communities and extremely poor households, who could be excluded from such partnerships.

Life skills

The activities of girls' clubs vary from country to country and, indeed, from school to school. Clubs in Nigeria seem to be the most active of the three countries and mostly engage girls in manually producing products to generate income for their school. Girls and teachers report being proud of being members of these clubs as well as seeing girls benefiting from their membership and improving their life skills and confidence. We also found that there are other girls' clubs in Nigeria and that most girls attend drama clubs and girl scout clubs. In Kenya and Ghana, girls' clubs were more focused on raising awareness and knowledge on the part of girls about personal hygiene and menstruation. These represent one of the barriers to girls' attendance, as identified in our study, and therefore meet the girls' everyday needs. Although income-generating activities are useful, focusing on a specific barrier to girls' education through clubs seems to be the most advantageous approach for DP-2. However, it is unclear how these clubs select their programmes and decide on activities to engage with, as well as the extent to which girls themselves have a say in such a decision. The fact that clubs require some financial contribution toward some materials undermines the possible membership of girls who particularly struggle financially and live in extremely poor areas. In some cases, teachers report selecting girls who perform well and are neat, which potentially excludes the group of girls who are extremely poor and are likely not to have 'proper' clothing, be late to school due to work and distances to school, and to generally not do well at school. In a way, girls' clubs could thus be exacerbating the exclusion of girls instead of including those most in need.

6.2 Recommendations

Recommendations against observed barriers to education

DP-2 should revisit its ToC with specific attention to better articulating the strength of evidence behind each step in the causal pathways, and particularly the implicit assumptions that underpin these causal pathways. The current version of the ToC does not explicitly address how external factors may undermine the achievement of expected outcomes, and while these may be outside the control of

DP-2 they should be acknowledged in order to encourage focus for project activities and encourage DP-2 stakeholders to think of innovative approaches to reducing the major barriers currently thought of as external to the project.

DP-2 should demonstrate a more nuanced understanding of the different profiles of marginalised girls. Currently, DP-2 assumes that all girls served by the project are marginalised, which suggests a homogenous group facing a similar set of barriers. This ignores the heterogeneity observed in this report among girls exposed to DP-2 who face multiple dimensions of marginalisation, which, when overlapping, become much harder to address. Distinguishing between marginalised and extremely marginalised girls will allow the programme to identify those most in need of support through project activities.

The importance of updating the ToC and providing more nuance in the definition of marginalisation is demonstrated with extreme poverty being an important external factor affecting attendance, transition, and learning. While some CAPs seek to address these issues, DP-2, in the training of CAP members, could pay specific attention to supporting communities to overcome this barrier (and other major barriers not currently specifically addressed by the project). In addition, some of the project activities that require financial contributions from families and communities such as expenses for girls' clubs or maintenance fees for DP-2 equipment, in addition to existing school-related expenses, may exclude the most marginalised from benefiting from DP-2 activities.

DP-2 could consider collaborating with other actors in human development sectors and government agencies to provide better coordinated support to extremely marginalised girls (and their communities and households). These efforts could be more successful in addressing multiple barriers through more direct and targeted interventions. This could include targeting the same girls for providing meals at school, supporting girls with sanitary items, providing cash to attend clubs, buying them uniforms, etc. More research into the best way of helping poor families will be useful since the links between some interventions such as removing school fees and better learning are not straightforward. **Moreover, better knowledge sharing with other actors in the sector to learn what works, how, in which context, and for whom will be useful, especially in regard to teacher training.** All three countries have had a number of teacher training projects in the past but teachers, especially in Nigeria, do not demonstrate adequate teaching practices. Such collective learning could help identify what is going wrong and what DP-2 can learn from others. While DP-2 country teams may have limited capacity to engage in this type of activity, DFID country offices could certainly support these efforts by making connections with organisations working to address the relevant barriers.

Recommendations against outcomes

DP-2 should clearly define what is meant by self-efficacy, aligned to the work it is undertaking via the MBW Curriculum. A clear definition of this would support a concerted effort by country teams to achieve progress against this indicator. Currently, the DP-2 definition is broad and open to interpretation and this does not support focused efforts to make progress against this outcome.

The GEC-T definition of transition does not distinguish between progression within primary grades and transition to JSS. However, we have identified barriers that affect progression and transition differently. It may be helpful for GEC-T to revert to an education norm definition of progression and transition that would encourage a more nuanced understanding of the different barriers that threaten progress at specific points of a girl's education. This will be particularly important as girls begin to transition into JSS in Ghana and Nigeria.

Literacy learning outcomes in Nigeria are of serious concern. This is in large part outside of DP-2's control, however, given that teachers in Nigeria often demonstrate a poor command of the English language themselves. DP-2 and GEC-T should reconsider whether current expectations around improvements in literacy against English are realistic given this context, and whether literacy training in Nigeria should instead focus on much more fundamental elements of understanding.

The sustainability of certain activities and in particular the teacher training remains reliant on key individuals, principally resource teachers and local MoE staff. Given the high rates of teacher turnover and the potential for local MoE staff to transfer or move on themselves this remains a threat to the sustainability of DP-2 activities. We recommend that DP-2 consider specific engagement with the MoE to support the regularisation of key DP-2 activities in education sector planning and budgeting. We also recommend that DFID, given its access at these levels, provides some support to DP-2 (and indeed other GEC-T projects) in this regard.

Recommendations against intermediate outcomes

Increased support to attendance monitoring. Attendance is a key intermediate outcome for DP-2. Given that there are some discrepancies in attendance-keeping practices (particularly in Nigeria and to some extent in Kenya), we would strongly encourage the DLA country teams to work closely with schools through their monitoring visits to encourage and monitor attendance-keeping approaches in schools.

The literature review suggests that community-based monitoring has the potential to improve attendance as well as school quality. DP-2 could consider supporting community-based monitoring of DP-2 schools through existing CAP structures. The programme could, for example, provide school scorecards to be published publicly that rate DP-2 schools against their relative performance among all DP-2 schools using indicators crucial to the success of DP-2 activities. This is potentially a low-cost activity that would make use of DP-2's M&E system, but could greatly facilitate conversations between schools and the communities they serve (e.g. by providing attendance rates of the school relative to all DP-2 schools, or indeed their performance on attendance keeping).

We find that CAP members are generally influential members of the community. While we find no evidence of this at baseline, there is a danger that this might encourage 'elite capture', in the sense that the only barriers to education that are considered are those that might affect the children of CAP members. DP-2 could consider encouraging a more diverse CAP membership (e.g. by having some membership positions drawn via a random lottery of parents) that would at least encourage voices that might not otherwise be heard.

Given evidence that teachers perform poorly in assessing student performance, DP-2 should support teachers to improve their understanding of the importance of and their ability to: (i) gather information about what all pupils understand and are able to do; (ii) consider what that information might mean; and (iii) alter classroom practice accordingly. This might include an exploration with teachers of the desired thinking process behind assessments of learning, which would allow them to better understand what they know about the levels of attainment of pupils, how they know what they know, and how that knowledge should alter their practice.

We find that the teaching methods DP-2 intends to focus on are only used rarely in classrooms at present, in particular the desired move away from front-led teaching. Teachers' practice within classrooms is driven not only by their knowledge and skills but also by incentive structures and the culture they work within. We therefore recommend working as intensively with schools as possible and working with teachers to better understand the barriers to implementing new approaches and how they may be overcome.

Annexes

Annex documents are submitted in a separate attachment.

Annex 1: Logframe



DP2 Baseline
Logframe.xlsx

Annex 2: Outcomes Spreadsheet



Outcome

Spreadsheet - Ghana



Outcome

Spreadsheet - Kenya



Outcome

Spreadsheet - Nigeria

Annex 3: Key findings on Output Indicators

Table 1: Output indicators

Logframe Output Indicator	Means of verification/sources	Collection frequency
Number and Indicator wording	List all sources used.	E.g. monthly, quarterly, annually. NB: For indicators without data collection to date, please indicate when data collection will take place.
Output 1: Teachers gain requisite confidence, skills, and resources to teach literacy and numeracy inclusively and effectively		
Output 1.1: Percentage of teachers reporting gained knowledge, skills and attitudes of improved numeracy and literacy teaching methods during training	Internal Monitoring Data: Questionnaires and Logs initially collected by staff at trainings and subsequently during coaching and mentoring visits to schools by DLA staff that are then uploaded onto the internal monitoring system; Mobile phones periodically afterwards through the Cell-Ed platform	Monthly
Output 1.2: Percentage of schools using media resources at least 5/week during and after school hours	Internal Monitoring Data: Video Usage Logs collected by DLA staff and MOE officials during periodic school visits that are then uploaded onto the internal monitoring system; Mobile phone reports through the Cell-Ed platform	Monthly
Output 1.3: Number of video segments featuring new content produced, aggregated, and distributed to participant schools	Internal Monitoring Data: Distribution Logs as recorded by DLA staff upon delivery to each school that are then uploaded onto the internal monitoring system	Single event – Recorded upon delivery
Output 1.4: Percentage of teachers accessing Cell-Ed refresher questions/ reminders in numeracy and literacy	Internal Monitoring Data: Cell-Ed data portal reporting teacher usage	As reported, to begin after Cell-Ed begins full implementation in Q7.
Output 2: Communities take action to support local schools and girls' learning, retention, and transition through community action planning		
Output 2.1: Number of community action plans that specifically address learning	Direct observation of Community Action plans by DLA staff during local staff visits, as each CAP is reviewed, categorized, and uploaded into the internal database; Mobile phone reports through the Cell-Ed platform will also provide additional self-reported data to supplement site visits.	Monthly
Output 2.2: Number of community action plans that specifically address retention/transition	Internal Monitoring Data: Direct observation of Community Action plans by DLA staff during local staff visits as each CAP is reviewed, categorized, and uploaded into the internal database; Mobile phone reports through the Cell-Ed platform will also provide additional self-reported data to supplement site visits.	Monthly

Logframe Output Indicator	Means of verification/sources	Collection frequency
Output 2.3: Number of concrete steps taken to implement community action plans	Direct observation of Community Action plan implementations by DLA staff during local staff visits that are then recorded in the internal database; Interviews with community members and school officials conducted by DLA staff visits to confirm activity; Mobile phone reports through the Cell-Ed platform will also provide additional self-reported data to supplement site visits.	Monthly
Output 2.4: Number of girls reporting reading and math tutoring / academic support	Interviews with tutors and girls receiving support by DLA staff during local staff visits; Mobile phone reports through the Cell-Ed platform.	Quarterly (once per school term)
Output 3: Girls and boys gain life skills training, mentoring support, and access to resources		
Output 3.1: Percentage of girls taking part in club activities	Internal Monitoring Data: Interviews with club mentors and girls' club members by DLA staff during local staff visits; Mobile phone reports through the Cell-Ed platform	Monthly
Output 3.2: Breakdown of categories of girls club activities	Internal Monitoring Data: Interviews with club mentors and girls' club members by DLA staff during local staff visits; Mobile phone reports through the Cell-Ed platform	Monthly
Output 3.3: Percentage of boys participating in targeted life skills curriculum as part of boys clubs	Internal Monitoring Data: Interviews with club mentors and boys' club members by DLA staff during local staff visits; Mobile phone reports through the Cell-Ed platform	Monthly
Output 4: School and government partners take the lead on integration, monitoring, and follow-up support		
Output 4.1: Number of engagements of the project by local MOE officials	Internal Monitoring Data: District MOE reporting as recorded during visits and check-ins with DLA staff; Direct observation at the school level by DLA staff during routine visits in relevant schools	Quarterly
Output 4.2: Number of school MOUs signed with MOE backing and support	Internal Monitoring Data: Documentation provided by the school and MOE	Single event – recorded upon signing
Output 4.3: Percentage of schools that have developed plans to continue active use of educational media and continue teacher training	Internal Monitoring Data: Direct observation by DLA staff during school visits of documentation provided by the school and MOE	Monthly

Report on the Baseline values/Baseline status of each Output Indicator in the table below. Reflect on the relevancy of the Output Indicator for your Intermediate Outcomes and Outcomes and the wider Theory of Change based on the data collected so far. Are the indicators measuring the right things? What do the Baseline values/Baseline status mean for the implementation of your activities?

Table 2: Baseline status of output indicators

Logframe Output Indicator	Baseline status/Baseline values Relevance of the indicator for the project ToC	Baseline status/Baseline values
Number and Indicator wording	What is the contribution of this indicator for the project ToC, IOs, and Outcomes? What does the Baseline value/status mean for your activities? Is the indicator measuring the right things? Should a revision be considered? Provide short narrative.	What is the Baseline value/status of this indicator? Provide short narrative.
Output 1: Teachers gain requisite confidence, skills, and resources to teach literacy and numeracy inclusively and effectively		
Output 1.1: Percentage of teachers reporting gained knowledge, skills and attitudes of improved numeracy and literacy teaching methods during training	This indicator is useful for confirming the utility of trainings as perceived by teachers. Baseline indications confirm that teachers do report taking part in training and then link to performance (cf. IO2). No revision suggested at this time.	While not explicitly measured by the baseline, the baseline did find that most teachers had undergone some training (cf. Table 38).
Output 1.2: Percentage of schools using media resources at least 5/week during and after school hours	Usage of the LC is key for fostering an improved classroom environment by making materials more relatable to students. The baseline indicates that DP schools are using them to teach in some cases, but not in observed classes. No revision suggested at this time.	The baseline indicated that use of the video resources was not widespread in observed classes. It should be noted that literacy and numeracy materials had not been distributed and this figure is expected to increase as these specific video segments are distributed to schools.
Output 1.3: Number of video segments featuring new content produced, aggregated, and distributed to participant schools	As above, usage of the LC is key for fostering an improved classroom environment by making materials more relatable to students. No revision suggested at this time.	These videos had not been distributed at the time of baseline.
Output 1.4: Percentage of teachers accessing Cell-Ed refresher questions/ reminders in numeracy and literacy	Cell-Ed is a new means of reaching project teachers through mobile technology. It is primarily to be used as a resource for teachers and act as a reinforcement of training and mentorship. No revision suggested at this time.	Cell-Ed had yet to start at the time of baseline.
Output 2: Communities take action to support local schools and girls' learning, retention, and transition through community action planning		
Output 2.1: Number of community action plans that specifically address learning	The ToC assumes that community engagement is key to increasing girls' learning. At Baseline, most, but not all communities have active CAPs. These CAPs are developed as part of DP2's community workshops and communities are necessarily encouraged to include addressing this topic. Suggest revising to reflect more actions taken.	The baseline notes that while CAPs are in place, many are not being fully implemented. Further not all communities have widespread awareness of these plans.
Output 2.2: Number of community action plans that specifically address retention/transition	The ToC assumes that community engagement is key to increasing girls' retention/transition. At Baseline, most, but not all communities have active CAPs. These CAPs are developed as part of DP2's community workshops and communities are	The baseline notes that while CAPs are in place, many are not being fully implemented. Further not all communities have widespread awareness of these plans.

Logframe Output Indicator	Baseline status/Baseline values Relevance of the indicator for the project ToC	Baseline status/Baseline values
	necessarily encouraged to include addressing this topic. Suggest revising to reflect more actions taken.	
Output 2.3: Number of concrete steps taken to implement community action plans	As above, these plans are critical to encouraging community support. As such this measure is a good indicator of a community's commitment to the CAP process. No revision suggested at this time.	The baseline notes that while CAPs are in place, many are not being fully implemented. More communities need to be encouraged to use these tools going forward.
Output 2.4: Number of girls reporting reading and math tutoring / academic support	This is a critical part of the project. Much work establishing these remedial groups was done during and even after data collection. As a result, the baseline does not address this issue sufficiently. Further, the measure, while useful, is not sufficient. Revision is suggested to add a measure of performance in the form of "learner checks" for the girls.	As noted, this is not adequately addressed in the baseline due to its late implementation. There are few numbers currently regarding this.
Output 3: Girls and boys gain life skills training, mentoring support, and access to resources		
Output 3.1: Percentage of girls taking part in club activities	Club activities are an important part of promoting life skills among target beneficiaries. Baseline indicates that club participation varies across countries and widely from school to school. A more refined measure of activity beyond participation is recommended.	The baseline does not have exact values as to participation other than to note it varies within and among differing project regions.
Output 3.2: Breakdown of categories of girls club activities	This is a potentially useful indicator in its ability to describe the variety of ways girls use these clubs to promote life skills. No revision suggested at this time.	The baseline noted that the types of activities are varied although there are larger trends. For example the baseline noted that clubs in Nigeria are more likely to be engaged in income generating activities.
Output 3.3: Percentage of boys participating in targeted life skills curriculum as part of boys clubs	While boys' clubs are promoted by the project they are optional for schools. Participation is not a useful measure and should be refined as the role of boys clubs becomes clear over the course of the project. Revision of this indicator is suggested.	The baseline did not address this as it was not a focus of the evaluation.
Output 4: School and government partners take the lead on integration, monitoring, and follow-up support		
Output 4.1: Number of engagements of the project by local MOE officials	This is a useful measure of on-the-ground support of the project by MOE partners. It is a necessary first step in establishing local system support for the project. As such this is useful to continue to measure. No revision suggested at this time.	The baseline notes that MOE officials vary in their support by country and region. Further it suggests that more can be done by the project to institutionalize the role of the MOEs in implementation.
Output 4.2: Number of school MOUs signed with MOE backing and support	School commitment to the project is critical to the sustainability of the project. However, MOUs with MOE backing are a requirement of all schools participating. Therefore, a more useful measure of school commitment may be needed.	The baseline notes that school commitment to the project is generally where DP2 rates strongest. The state of MOUs is addressed.
Output 4.3: Percentage of schools that have	This is an important measure to gauge a school's commitment. Schools that are thinking	The baseline notes that school commitment to the project is generally where DP2 rates

Logframe Output Indicator	Baseline status/Baseline values Relevance of the indicator for the project ToC	Baseline status/Baseline values
developed plans to continue active use of educational media and continue teacher training	of continuing the project and codifying them into plans are more likely to sustain activity beyond the life of the project. No revision suggested at this time.	strongest. More work can be done in this area to improve the overall status of the project in participant schools.

Table 3: Output indicator issues

Logframe Output Indicator	Issues with the means of verification/sources and the collection frequency, or the indicator in general?	Changes/additions
Number and Indicator wording	E.g. inappropriate wording, irrelevant sources, or wrong assumptions etc. Was data collection too frequent or too far between? Or no issues?	E.g. change wording, add or remove sources, increase/decrease frequency of data collection; or leave as is.
Output 1: Teachers gain requisite confidence, skills, and resources to teach literacy and numeracy inclusively and effectively		
Output 1.1: Percentage of teachers reporting gained knowledge, skills and attitudes of improved numeracy and literacy teaching methods during training	No issues.	Leave as is.
Output 1.2: Percentage of schools using media resources at least 5/week during and after school hours	Verification of school usage logs remains a challenge. Specifically, the time needed for DP2 staff to collect and record this indicator is problematic in that it may take time away from other monitoring activities.	Consider alternate means of data collection.
Output 1.3: Number of video segments featuring new content produced, aggregated, and distributed to participant schools	No issues.	Leave as is.
Output 1.4: Percentage of teachers accessing Cell-Ed refresher questions/ reminders in numeracy and literacy	No issues.	Leave as is.
Output 2: Communities take action to support local schools and girls' learning, retention, and transition through community action planning		
Output 2.1: Number of community action plans that specifically address learning	The number of CAPs that address learning and transition is irrelevant in that all should be addressing these issues on some level. More meaningful measures such as activities completed or recorded evidence of progress in learning or transition would be suggested.	Refine the indicator to record when there is actual evidence of learning/transition improvement and noting the evidence cited.
Output 2.2: Number of community action plans that specifically address retention/transition	See above	See above
Output 2.3: Number of concrete steps taken to implement community action plans	No issues.	Leave as is.
Output 2.4: Number of girls reporting reading and math tutoring / academic support	This indicator is not adequate enough to capture the work DP2 is doing in this area. Learner checks are being implemented and this indicator should be altered to reflect this.	Remove and replace with data from learner checks conducted per term.

Output 3: Girls and boys gain life skills training, mentoring support, and access to resources		
Output 3.1: Percentage of girls taking part in club activities	This is not meaningful as not all girls can or should be expected to take part in club activities. Rather a measure of how active girls are and what kind of activities they engage in would be far more useful.	Remove and replace with a more specific measure of how active clubs are in terms of activities and meeting.
Output 3.2: Breakdown of categories of girls club activities	No issues.	Leave as is.
Output 3.3: Percentage of boys participating in targeted life skills curriculum as part of boys clubs	It remains to be seen how many boys' clubs will be formed. Further, as above, participation is an insufficient measure of effectiveness.	Remove and replace with a measure of how active clubs are while noting the breadth of adoption of these clubs.
Output 4: School and government partners take the lead on integration, monitoring, and follow-up support		
Output 4.1: Number of engagements of the project by local MOE officials	No issues.	Leave as is.
Output 4.2: Number of school MOUs signed with MOE backing and support	As stated above, as all schools are required to have this, it is not a meaningful enough indicator. Other measures of school commitment can be developed.	Suggest a new indicator to better capture school and MOE commitment to the project.
Output 4.3: Percentage of schools that have developed plans to continue active use of educational media and continue teacher training	Wording on this indicator can be improved and made more precise. Activities as part of schools that have enacted part of these plans can be recorded.	Refine the wording to be more precise in capturing the level of commitment schools have and what they have done to ensure continued activity.

Annex 4: Beneficiary tables

This annex should be completed by the project.

Please fill in the tables below. Individuals included in the project's target group should be direct beneficiaries of the project.

Table 4: Direct beneficiaries

Beneficiary type	Total project number	Total number of girls targeted for learning outcomes that the project has reached by Endline	Comments
Direct learning beneficiaries (girls) – girls in the intervention group who are specifically expected to achieve learning outcomes in line with targets. If relevant, please disaggregate girls with disabilities in this overall number.	461,351 -Nigeria: 204,031 -Ghana: 104,365 -Kenya: 152,955	TBD	The number of beneficiaries for the project is defined as those girls in schools where DP2 is active. While the project does attempt to focus on girls in grades 5-6-7, the reality is that teachers in these schools teach all grades and subjects, using materials provided.

Table 5: Other beneficiaries

Beneficiary type	Number	Comments
Learning beneficiaries (boys) – as above, but specifically counting boys who will get the same exposure and therefore be expected to also achieve learning gains, if applicable.	408,935 -Nigeria: 144,445 -Ghana: 111,697 -Kenya: 152,798	Boys in DP2 schools learn along with the girls in their school and are exposed to the same benefits of improved teaching practices and materials provided by the project. Accordingly, all boys in these schools can be said to benefit directly from the project.
Broader student beneficiaries (boys) – boys who will benefit from the interventions in a less direct way, and therefore may benefit from aspects such as attitudinal change, etc. but not necessarily achieve improvements in learning outcomes.	12,557	This number consists entirely of boys in grades 9-10 in Kenya as these schools receive only a portion of the full intervention, specifically support for clubs and provision of materials, but not the full suite of training for the project.
Broader student beneficiaries (girls) – girls who will benefit from the interventions in a less direct way, and therefore may benefit from aspects such as attitudinal change, etc. but not necessarily achieve improvements in learning outcomes.	20,750	These girls as with the boys mentioned above are exclusively concentrated in Secondary schools in Kenya. And considered secondary for the same reasons noted above.
Teacher beneficiaries – number of teachers who benefit from training or related interventions. If possible /applicable, please disaggregate by gender and type of training,	10,000 (estimated)	This number includes teachers that have gone through the project's numeracy and literacy training only. It does not include the larger number of teachers that

with the comments box used to describe the type of training provided.		may receive additional training and support from both DLA and DLA-trained teachers.
Broader community beneficiaries (adults) – adults who benefit from broader interventions, such as community messaging /dialogues, community advocacy, economic empowerment interventions, etc.	TBD	While the project does include interventions in the community, there are no exact figures to provide in this space. Counts of those participating in Community Workshops would be misleading as these participants (which include teachers and school administrators) are directed to in turn reach out to the broader community. This number may be revisited at later points in the evaluation as more data becomes available.

- Tables 3-6 provide different ways of defining and identifying the project's target groups. They each refer to the same total number of girls, but use different definitions and categories. These are girls who can be counted and have regular involvement with project activities.
- The total number of sampled girls in the last row of Tables 3-6 should be the same – these are just different ways of identifying and describing the girls included in the sample.

Table 6: Target groups - by school

	Project definition of target group (Tick where appropriate)	Number targeted through project interventions	Sample size of target group at Baseline
School Age			
Lower primary	X	231,137	
Upper primary	X	154,091	3,369
Lower secondary	X	76,123	
Upper secondary			
Total:			[This number should be the same across Tables 3, 4, 5 & 6]

Table 7: Target groups - by age

	Project definition of target group (Tick where appropriate)	Number targeted through project interventions	Sample size of target group at Baseline
Age Groups			
Aged 6-8 (% aged 6-8)	X	-Nigeria: 91,357, -Ghana: 37,406 -Kenya: 68,922	-Nigeria: 38 -Ghana: 4 -Kenya: 2
Aged 9-11 (% aged 9-11)	X	-Nigeria: 51,552 -Ghana: 24,209 -Kenya: 38,375	-Nigeria: 617 -Ghana: 225 -Kenya: 771

Aged 12-13 (% aged 12-13)	X	-Nigeria: 37,350 -Ghana: 24,065 -Kenya: 31,213	-Nigeria: 368 -Ghana: 505 -Kenya: 368
Aged 14-15 (% aged 14-15)	X	-Nigeria: 14,119 -Ghana: 11,065 -Kenya: 13,858	-Nigeria: 101 -Ghana: 216 -Kenya: 81
Aged 16-17 (%aged 16-17)		-Nigeria: 10,020 -Ghana: 7,840 -Kenya: 0	-Nigeria: 14 -Ghana: 33 -Kenya: 2
Aged 18-19 (%aged 18-19)			-Nigeria: 0 -Ghana: 4 -Kenya: 0
Unknown			-Nigeria: 2 -Ghana: 16 -Kenya: 2
Total:			[This number should be the same across Tables 3, 4, 5 & 6]

Table 8: Target groups - by sub group

Social Groups	Project definition of target group (Tick where appropriate)	Number targeted through project interventions	Sample size of target group at Baseline
Disabled girls (please disaggregate by disability type)	NA	NA	
Orphaned girls	NA	NA	
Pastoralist girls	NA	NA	
Child labourers	NA	NA	
Poor girls	NA	NA	
Other (please describe)	NA	NA	
Total:			[This number should be the same across Tables 3, 4, 5 & 6]

Table 9: Target groups - by school status

Educational sub-groups	Project definition of target group (Tick where appropriate)	Number targeted through project interventions	Sample size of target group at Baseline
Out-of-school girls: have never attended school			

Out-of-school girls: have attended school, but dropped out			
Girls in-school	x	461,351	3,369
Total:			[This number should be the same across Tables 3, 4, 5 & 6]

Annex 5: MEL Framework



MEL Framework
Discovery Project.do

Annex 6: External Evaluator’s Inception Report



DP-2_Inception
Report_SUBMITTED.docx

Annex 7: Data collection tools used for Baseline

See separate attachment for both quantitative and qualitative baseline tools.

Table 10 presents the list of quantitative and qualitative tools for the DP-2 evaluation.

Table 10. DP-2 quantitative and qualitative tools

Tools	Description	Respondent	Frequency
Quantitative tools			
School survey	Adapted from the previous GEC-1, the purpose of this instrument is to gather data on school level characteristics including but not limited to school demographic characteristics, enrolment, cohort attendance, cohort transition of students, teacher characteristics, training and support received, etc.	Head or deputy teacher	Baseline, midline and endline
Head count	Adapted from the previous GEC-1, the purpose of the head count tool is to measure and monitor the attendance-keeping practices of teachers including actual head count of students (girls and boys) present in the class for the day of the school visit compared to the attendance recorded by the teacher for that day. It also capture previous day attendance rate and whether attendance was recorded for the past five days prior to survey.	One class each in primary 5, 6 and 7/JSS-1	Baseline, midline and endline
Classroom observation + teacher assessment	Designed by OPM's education team to capture information about the three foci of the programme: student-centred, gender-responsive and interactive pedagogy, use of video/media, and numeracy and literacy pedagogy. The teacher assessment module included in the classroom observation tool will be used to test teachers' understandings of the different pedagogical methods and approaches covered by DP-2.	One English or Math class in primary 5, 6 or 7/JSS-1 ¹	Baseline, midline and endline

¹ In treatment schools, only DP-2 trained teachers who received the numeracy and literacy training either directly from DLA or through the step-down training approach will be observed. Additional trainings such as the Intensive Teacher Training (ITT) and Gender Responsive Pedagogy (GRP) will be key as well for the selection of the teacher.

Learning assessments	Designed by OPM's education specialist and local education experts following the guidelines provided by RTI and FM. Both EGRA/EGMA and SEGRA/SEGMA tools have been designed and adapted in line with the curriculum for each country and the DP-2 numeracy and literacy 1 training modules. The tools will capture students (i.e. cohort girls) proficiency in reading and math skills.	Cohort girls in primary 5, 6 and 7/JSS-1	Baseline, midline and endline
Girls survey	GEC-T tool adapted for this evaluation. A 10 - point self-efficacy scale drawing from Schwarzer, R. & Jersusalem, M. Other questions relating to self-efficacy, life skills, decision-making, and feelings and attitudes (that comprised the girl module) were adapted from the DP-1 evaluation and from the 2013/14 Young Lives Child Questionnaire for the younger cohort in Ethiopia. The main purpose of the tool is to measure the cohort girls education and future aspiration, confidence, motivation, etc.	Cohort girls in primary 5, 6 and 7/JSS-1	Baseline, midline and endline
Household survey	GEC-T tool adapted for this evaluation. This tool captures household background and demographic information for each of the cohort girls.	Households of the cohort	Baseline and endline
Qualitative tools			
Interviews with head teachers and DLA resources teachers	<ul style="list-style-type: none"> - To get information about the school background, current state of teachers' qualifications, training they received so far, their views of training received and application of skills and knowledge - To get information about school attendance and transition, attitudes towards girls' education in the community and those of parents from the HT's perspectives. - To explore whether or not and in what ways schools interact with parents and community members - To understand HT's perception of the project, understanding of project activities and their progress, aspects of projects which are perceived as useful to HT and teachers as well as any issues with relationship to sustainability of the project 	Head teachers and DLA resource teachers at sampled schools	Baseline, midline and endline

Interviews with DLA trained teachers	<ul style="list-style-type: none"> - To get information about the school background, current state of teachers' qualifications, training they received so far, their views of the training they received and how they use their new knowledge/skills - To get information about school attendance and transition, attitudes towards girls' education in the community and homes from the teachers' perspectives. - To understand the way teachers perceive the DLA project activities and understand their purpose, explore teachers' perception of the project and how they make use of DLA teaching and learning materials 	<p>Teachers trained as minimum requirement on DLA literacy and numeracy modules</p>	<p>Baseline, midline and endline</p>
Interviews with girls' club patrons/mentors	<ul style="list-style-type: none"> - To get information about the girls club background, the role of the mentor, how the club was set up, when, what kind of activities it runs, how curricular is developed, how it runs - To explore the selection of girls for the club, how, why, and how long for, how often they attend it - To get information about the interactions and attitudes of school, parents and community towards clubs - To explore the club's effects on its members, non-members and identify any issues with relationship to sustainability of the project and challenges it is facing if any 	<p>Mentors/patrons of girls' clubs at sampled schools</p>	<p>Baseline, midline and endline</p>
Rich picture exercise with girls	<ul style="list-style-type: none"> - To understand common shared issues around girls' education (including barriers to education) in any given community from girls' perspectives - To discuss with girls their view of self-efficacy - To explore whether or not girls are attending girls club and how their experience has been so far - To probe if girls would report any changes to the teaching they have been receiving. 	<p>Girls in primacy 5 or 6</p>	<p>Baseline, midline and endline</p>
Paper diaries with girls	<ul style="list-style-type: none"> - To provide space for girls to log the events and experiences of daily life at home in order to understand how they interact with their parents and family as well as with teachers and peers at school - To understand parents' and families' attitudes to and participation in the girls education - To explore if girls report any increased interest in reading, writing and/or mathematics and/or improvement in their literacy and numeracy skills, how they are experiencing teaching and whether 	<p>Boys in primary 5 or 6</p>	<p>Baseline, midline and endline (possible to collect in between)</p>

	or not they enjoy extra-curricular activities and if they do, why/how		
Rich picture exercise with boys	<ul style="list-style-type: none"> - To understand common shared issues around girls' education, nature of barriers to girls' education and the issue of girls' self-efficacy from the boys' point of view 	Boys from primary 5 and 6 at sampled schools	Baseline, midline and endline
Interviews with community leaders	<ul style="list-style-type: none"> - To understand the role of community leaders, who they are, what role they play in relation to the DLA - To explore their relationships and interactions with school before DLA and now - To explore if community's support to girls' education is sustainable at the community level 	Community leaders are chiefs or deputy chiefs of Imams	Baseline, midline and endline
Group interviews with community members	<ul style="list-style-type: none"> - To examine whether or not communities are in support of girls education and in what ways - To understand current state of attitudes and beliefs towards girls education in community - To investigate progress of CAP in community 	Community members who were part of CAP process and are members of PTA or any other school – community structures	Baseline, midline and endline
Interviews with cohort girls' parents	<ul style="list-style-type: none"> - To understand parental aspiration for their girl child, their attitudes and beliefs towards girls education and any change over time - To explore parents' attitudes towards school, teachers and head teachers and value of schooling in general - To understand what parents understand as their daughter's self-efficacy - To explore if parents know anything about DLA project activities and see value in them, why and how and whether or not they are able to notice any change in their daughter's learning outcomes 	Parents of cohort girls who participated in diary activity	Baseline, midline and endline

Annex 8: Datasets, codebooks and programs

- All data has been submitted to the FM

Annex 9: Learning test pilot and calibration

Design of the learning tests

As per the GEC-T MEL guidance document, the following learning assessment tools were designed for the DP-2 evaluation for each country:

- three versions of the Early Grade Math Assessment (EGMA) for each country
- three versions of the Early Grade Reading Assessment (EGRA) for each country
- three versions of the Secondary Early Grade Math Assessment (SeGMA) for each country
- three versions of the Secondary Early Grade Reading Assessment (SeGRA) for each country

Piloting of the learning tests

While three versions of each learning assessment were designed, only the following versions were piloted prior to baseline:

Table 11. Versions of the learning assessment tools piloted by primary/JSS-1 level and country

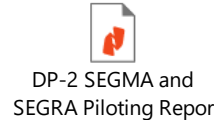
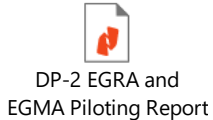
Tools/Primary levels	Kenya	Ghana	Nigeria
EGRA and EGMA			
Primary 5	Version A & Version B	Version A & Version B	Version A & Version B
Primary 7	Version B	Version B	Version B
SeGRA and SeGMA			
Primary 7	Version A	Version A	Version A

The purpose of the pilot was to:

- Calibrate Version A and Version B of the EGRA and EGMA assessments to the same level of difficulty
- Equate the EGRA/EGMA and SeGRA/SeGMA assessments through common persons equating

In each country, 10 treatment schools were selected for the pilot. Selection of the pilot schools for this exercise were conducted in close collaboration with the DLA country teams. We tried to make sure that the schools selected were reflective of the different types of DP-2 schools (i.e. taking into consideration different classifications such as urban/rural, non-formal/formal, etc.).

In each school, we randomly selected a minimum of 10 girls in Grade 5 and 10 girls in Grade 7 (Primary 7 in Kenya, JSS1 in Ghana and Nigeria). In some schools, where the number of girls was less than 10 we administered the assessment to all the female students in the grades of interest. Overall, about 75-100 students were assessed for each version of the test as per the GEC MEL guidance. See piloting reports for both EGRA/EGMA and SEGRA/SEGMA below.



Calibration of the learning tests

As discussed in the piloting reports, Version A and Version B of EGRA and EGMA were successfully calibrated across the three countries.

Methodology for marking the test

Marking of EGRA/EGMA

Marking of EGRA: The four reading subtasks are ‘marked’ using a reading speed indicator - number of letters / words correctly read per minute (Words Per Minute (WPM)), which is calculated as follows:

$$WPM = \frac{\text{Number of words read correctly}}{\text{Time allowed for the subtask (seconds)} - \text{Time remaining(seconds)}} \times 60$$

Where ‘Time remaining’ is the time remaining in a subtask if a pupil finished the task before the allotted time had expired. The WPM score does not cap naturally at any value. As per the guidance provided, the WPM scores were capped at 100, which is any WPMs higher than 100 were set to 100.

The fifth subtask (reading comprehension) consisted of five comprehension questions. Pupils’ answers were scored according to a marking scheme. Questions were multi-mark questions and answer schemes gave explicit instructions for how part marks should be awarded. The overall score for the subtask was calculated by adding up the total marks scored on the comprehension questions and dividing by the total number of available marks.

Marking of EGMA: Within each subtask, one mark is given for each question answered correctly. The score for each subtask is obtained as the total of correct answers over the total number of questions.

Treatment of non-response: ‘Non-response’ is treated as incorrect on all subtests. In EGRA/EGMA, most non-response occurs because of early-stop rules in the tests. Early-stop rules instruct the enumerator to move on to the next subtask if a pupil has answered a fixed number of previous questions incorrectly. Questions within subtasks in the EGRA/EGMA assessments increase in difficulty. In the EGMA addition questions for example, the addition sums gradually become more difficult. It is therefore likely that if a pupil cannot answer a certain number of consecutive questions correctly, they will be unlikely to answer any further questions in the subtask.

Marking of SEGRA/SEGMA

SEGMA and SEGMA are written tests that are completed by a pupil in a classroom setting. After administration, SEGMA/SEGMA were scored by trained enumerators with prior teaching experience. Detailed marking schemes for SEGMA/SEGMA were developed by the test designers, and enumerators were trained on how to apply these. For SeGMA, more difficult questions are assigned more marks (marks per question range between 1 and 4), and partial credit is awarded to answers with correct working but an incorrect or missing final answer. For SeGRA, the subtask included multi-

mark questions (marks per questions range between 1 and 4), and the marking scheme was explicit on how to assign part marks. In the marking scheme, non-response (i.e. a question that was left blank and not attempted by the pupil) was coded as -1 while an incorrect answer was coded as 0. The purpose of this was for the analyst to be able to gain an understanding of the proportion of questions that were attempted but answered incorrectly, as opposed to the proportion of questions that were not attempted at all. In calculating the final learning score, non-response is treated as incorrect and is assigned a score of 0. The full SEGRA/SEGMA tools and the marking schemes are attached in Annex 7. Summary scores on each of the SEGRA/SEGMA subtasks are converted into a percentage score before weighting.

Weighting of subtasks

As per the guidance provided, in creating an overall aggregate score for English literacy and for numeracy, all subtasks were weighted equally. The numeracy test is composed of 6 subtasks (5 EGMA and 1 SeGMA), so in the aggregate score each subtask counts for 1/6 of the total. The literacy test for the primary 5 cohort is composed of 5 EGRA subtasks, so in the aggregate score each subtask counts for 1/5 of the total. In Kenya and Ghana, girls in the benchmarking sample in primary 6 and primary 7 / JSS 1 also completed SEGRA task 1 and SEGRA task 3. For these girls, the aggregate score was constructed by equally weighting the 7 subtasks completed (5 EGRA + SEGRA task 1 + SEGRA task 3).

Annex 10: Sampling Approach and Framework

Table 12, Table 13, and Table 14 presents the final baseline sample schools by treatment and control for Ghana, Kenya and Nigeria, respectively.

Table 12: Ghana Baseline Sample School

Ghana				
School ID	School Name	Treatment Status	District	ALP
105	Kpabuso Ibadur Rahman E/A Kg/Primary	Treatment	Central Gonja	Yes
107	Kpasera D/A Kg/Primary	Treatment	Central Gonja	Yes
111	Yapei Presby Primary A	Treatment	Central Gonja	Yes
112	Kigbirpe D/A Primary	Treatment	Central Gonja	Yes
113	Kpabuso D/A Kg/ Primary school	Treatment	Central Gonja	Yes
119	Gbirigi Kg/D/A Primary	Treatment	Central Gonja	Yes
201	Iddrisiya Islamic Kg/Primary	Treatment	East Gonja	Yes
208	Naamu R/C Kg/ Primary	Treatment	East Gonja	Yes
209	Sakafatu Islamic Kg/Primary	Treatment	East Gonja	Yes
210	Salaga D/A Kg/Primary	Treatment	East Gonja	Yes
212	Yakubupe D/A Kg/Primary	Treatment	East Gonja	Yes
217	Kpembe D/A Primary	Treatment	East Gonja	Yes
225	Binjai Presby Kg/Primary	Treatment	East Gonja	Yes
306	Namburugu D/A Primary/Kg	Treatment	Karaga	Yes
307	Nasiria T.I. Ahmadiyya Kg/Primary	Treatment	Karaga	Yes
309	Nyong Guma E/A Kg/Primary School	Treatment	Karaga	Yes
310	Pishigu D/A Primary	Treatment	Karaga	Yes
313	Binduli Methodist Kg/Primary	Treatment	Karaga	Yes
318	Nangung-Nayili D/A Kg/Primary	Treatment	Karaga	Yes
326	Yemo-Karaga D/A Kg/Primary	Treatment	Karaga	Yes
404	Kalpohin Anglican Primary 'B' /Kg	Treatment	Sagnarigu	Yes
406	Kanvilli Tawfi Kiya Islamic Kg/Primary	Treatment	Sagnarigu	Yes
411	St. Augustine'S R/C Primary/Kg	Treatment	Sagnarigu	Yes
416	Tishigu Anglican Primary School 'A'	Treatment	Sagnarigu	Yes
417	Wurishe Community Albahdal Primary/Kg	Treatment	Sagnarigu	Yes
424	Bambawia Islamic Basic School	Treatment	Sagnarigu	Yes
431	Kalpohin Kamaria Islamic Primary/Kg	Treatment	Sagnarigu	Yes
438	Kalpohin Anglican Primary 'A'	Treatment	Sagnarigu	Yes
503	Janjori-Kukuo Ame Zion	Treatment	Savelugu	Yes
508	Savelugu Exp. Primary 'A'	Treatment	Savelugu	Yes
510	Yong M/A Primary School	Treatment	Savelugu	Yes
514	Diare E/A Primary 'A'	Treatment	Savelugu	Yes
517	Rashadiya E/A Primary	Treatment	Savelugu	Yes
522	Nakpanzoo Ame Prim.	Treatment	Savelugu	Yes
605	Bagliga Presby Primary	Treatment	Tamale Metro	Yes
606	Dabokpa Failiya Islamic Primary	Treatment	Tamale Metro	Yes
616	St. Joseph'S R/C Primary 'B'	Treatment	Tamale Metro	Yes

Ghana				
School ID	School Name	Treatment Status	District	ALP
617	St. Joseph'S R/C Primary 'C'	Treatment	Tamale Metro	Yes
618	St. Peter'S R/C Primary 'A'	Treatment	Tamale Metro	Yes
622	Zogbeli Ahmadiyya Primary	Treatment	Tamale Metro	Yes
623	Zogbeli M/A Primary 'A'	Treatment	Tamale Metro	Yes
625	Police Barracks M/A Primary	Treatment	Tamale Metro	Yes
627	Sobahiya M/A Kg Primary	Treatment	Tamale Metro	Yes
629	Dakpema M/A Primary 'A'	Treatment	Tamale Metro	Yes
630	Al-Markazia Islamic Primary	Treatment	Tamale Metro	Yes
641	Bethany M/A Primary	Treatment	Tamale Metro	Yes
703	Golinga Presby Primary	Treatment	Tolon	Yes
706	Tolon D/A Model Primary School	Treatment	Tolon	Yes
707	Yipelgu A.M.E Zion Primary School	Treatment	Tolon	Yes
709	Tali E/A Kg, Primary School	Treatment	Tolon	Yes
711	Nyankpala D/A Primary 'B'	Treatment	Tolon	Yes
809	Walewale D/A Primary 'B1'	Treatment	West Mamprusi	Yes
813	Wungu D/A Primary 'A'	Treatment	West Mamprusi	Yes
814	Wungu D/A Primary 'B'	Treatment	West Mamprusi	Yes
816	Takorayiri D/A Primary	Treatment	West Mamprusi	Yes
817	Walewale Marakaz E/A Prim.	Treatment	West Mamprusi	Yes
901	Good Shepherd	Treatment	Yendi	Yes
905	Nakpachei E P	Treatment	Yendi	Yes
907	Yendi Jubilee Prim.	Treatment	Yendi	Yes
908	Yendi M A Blk. B	Treatment	Yendi	Yes
909	Yendi R C Blk. A	Treatment	Yendi	Yes
911	Pion R C	Treatment	Yendi	Yes
106	Kpalangase D/A Kg/Primary School	Control	Central Gonja	No
114	Chama A.M.E Zion Primary	Control	Central Gonja	No
118	Kokoape D/A Kg/Primary	Control	Central Gonja	No
202	Jantong Dashei Islamic Kg/Primary	Control	East Gonja	No
206	Kpanshegu T.I Kg/Prim	Control	East Gonja	No
214	Upando D/A Kg/Primary	Control	East Gonja	No
218	Kabache Presby Primary /Kg School	Control	East Gonja	No
222	Techipe D/A Kg/Primary School	Control	East Gonja	No
304	Kasheli D/A Kg/Primary	Control	Karaga	No
305	Nakundugu D/A Kg/Primary	Control	Karaga	No
403	Imania Islamic Primary/Kg	Control	Sagnarigu	No
409	Shafieya Islamic Primay/ Kg	Control	Sagnarigu	No
410	Sognaayili Rayaniya Primary/Kg	Control	Sagnarigu	No
414	Tamale International Basic School	Control	Sagnarigu	No
415	Tishigu Anglican Primary 'C'	Control	Sagnarigu	No
418	Yong-Duuni M/A Primary/Kg	Control	Sagnarigu	No
423	Tunteiya M/A Primary /Kg	Control	Sagnarigu	No
426	Zamzamiya M/A Primary/Kg	Control	Sagnarigu	No
444	Aziziya Islamic Primary/Kg School	Control	Sagnarigu	No
445	Hattoub Islamic Primary/Kg	Control	Sagnarigu	No

Ghana				
School ID	School Name	Treatment Status	District	ALP
501	Ansuari Sunna E/A Prim.	Control	Savelugu	No
504	Nyeko M/A Primary Sch.	Control	Savelugu	No
505	Nyoglo Ame Zion	Control	Savelugu	No
511	Yoo R/C Primary School	Control	Savelugu	No
513	Diare Methodist Primary	Control	Savelugu	No
518	Jana Rabania E/A Prim.	Control	Savelugu	No
603	Anwar-Dua Islamic Primary	Control	Tamale Metro	No
604	Anwar-Rahaman Islamic Primary	Control	Tamale Metro	No
607	Dini-Watahazib Islamic Primary	Control	Tamale Metro	No
609	Kaladan E/P Primary 'A'	Control	Tamale Metro	No
610	Kaladan S.D.A Primary 'A'	Control	Tamale Metro	No
611	Kpanvo Islamic Primary	Control	Tamale Metro	No
612	Nanton-Zuo Zion Primary	Control	Tamale Metro	No
620	Uthmaniya M/A Primary	Control	Tamale Metro	No
621	Wamale Islamic Primary	Control	Tamale Metro	No
624	Farukiya M/A Primary	Control	Tamale Metro	No
628	Kaladan S.D.A Primary 'B'	Control	Tamale Metro	No
631	Centre For Faith And Edu. Primary	Control	Tamale Metro	No
634	Ibnul Qayim Islamic Primary	Control	Tamale Metro	No
645	Riyahd Soaliheen Isl. Primary	Control	Tamale Metro	No
702	Gburimani Ahmadiyya Primary School	Control	Tolon	No
704	Lungbung D/A Primary School	Control	Tolon	No
705	Lungbung-Gurugu A.M.E Zion Primary School	Control	Tolon	No
710	Kasuliyili E/A Primary School	Control	Tolon	No
802	Duu D/A Primary	Control	West Mamprusi	No
803	Guabuliga R/C Primary	Control	West Mamprusi	No
804	Hamdariya E/A Primary	Control	West Mamprusi	No
805	Janga Nuria E/A Prim.	Control	West Mamprusi	No
806	Kasenkpe D/A Primary	Control	West Mamprusi	No
807	Nasia D/A Primary	Control	West Mamprusi	No
808	Sagadugu R/C Primary	Control	West Mamprusi	No
810	Wulugu Al-Bakaria E/A Prim.	Control	West Mamprusi	No
811	Wulugu Ranch Primary	Control	West Mamprusi	No
812	Wulugu Zaami D/A Primary	Control	West Mamprusi	No
902	Jagando St. Thomas	Control	Yendi	No
903	Kamshegu Islamic	Control	Yendi	No
904	Kpasanando E P	Control	Yendi	No
910	Kpalbilogni R C	Control	Yendi	No

Table 13: Kenya Baseline Sample School

Kenya					
School ID	School Name	Treatment Status	County	Subcounty	ALP
2	Kepiro	Treatment	Kajiado	Isinya	Yes

Kenya					
School ID	School Name	Treatment Status	County	Subcounty	ALP
4	Oloshoibor	Treatment	Kajiado	Kajiado North	Yes
7	Lesonkoyo	Treatment	Kajiado	Mashuuru	Yes
8	Kerarapon	Treatment	Kajiado	Kajiado North	Yes
10	Upper Matasia	Treatment	Kajiado	Kajiado North	Yes
13	Rwaka	Treatment	Kiambu	Limuru	Yes
14	Thika	Treatment	Kiambu	Thika West	Yes
16	Limuru Model	Treatment	Kiambu	Limuru	Yes
18	Yikiatine	Treatment	Machakos	Mwala	Yes
20	St Pauls' Primary School	Treatment	Machakos	Athi River	Yes
22	Kinanie	Treatment	Machakos	Athi River	Yes
24	Karura Forest	Treatment	Nairobi	Westlands	Yes
27	Ngong Forest Primary	Treatment	Nairobi	Kibra	Yes
28	Farasi Lane	Treatment	Nairobi	Westlands	Yes
33	Mihang'O	Treatment	Nairobi	Njiru	Yes
34	Ng'Undu	Treatment	Nairobi	Njiru	Yes
35	City Pri. Sch.	Treatment	Nairobi	Starehe	Yes
36	Juja Road	Treatment	Nairobi	Starehe	Yes
44	Westlands	Treatment	Nairobi	Westlands	Yes
45	St Elizabeth Primary School	Treatment	Nairobi	Makadara	Yes
46	Kamiti Primary	Treatment	Nairobi	Kasarani	Yes
47	Mahiga Primary	Treatment	Nairobi	Kasarani	Yes
48	Kabete Vet Lab	Treatment	Nairobi	Westlands	Yes
49	Kiwanja Primary	Treatment	Nairobi	Kasarani	Yes
50	Umoja 1 Primary	Treatment	Nairobi	Embakasi	Yes
53	Bensophil Community Centre	Treatment	Nairobi	Dagoretti	Yes
54	St Juliet Primary	Treatment	Nairobi	Kamukunji	Yes
56	Lucky Shamir Educational Center	Treatment	Nairobi	Kasarani	Yes
59	Landmark	Treatment	Nairobi	Kasarani	Yes
60	St Peter Community	Treatment	Nairobi	Embakasi	Yes
65	High Gate Learning Cen.	Treatment	Nairobi	Embakasi	Yes
67	Saviour King Education Centre	Treatment	Nairobi	Kibra	Yes
68	Zelyn Academy	Treatment	Nairobi	Kibra	Yes
69	Dandorra Minorate Education Centre	Treatment	Nairobi	Embakasi	Yes
70	Sharp Education Centre	Treatment	Nairobi	Embakasi	Yes
74	Ushirika Children Centre	Treatment	Nairobi	Kibra	Yes
75	Magoso Primary School	Treatment	Nairobi	Langata	Yes
77	Anwa Junior Academy	Treatment	Nairobi	Kibra	Yes
78	Stara Rescue Centre And School	Treatment	Nairobi	Kibra	Yes
80	St Johns Korogocho	Treatment	Nairobi	Kasarani	Yes
82	Boston Children Centre	Treatment	Nairobi	Njiru	Yes
84	Evana Junior School	Treatment	Nairobi	Embakasi	Yes
86	Kag Mathare / Huruma	Treatment	Nairobi	Njiru	Yes

Kenya					
School ID	School Name	Treatment Status	County	Subcounty	ALP
89	Jupiter Community Learning Centre	Treatment	Nairobi	Njiru	Yes
90	Njiris Education Centre	Treatment	Nairobi	Njiru	Yes
91	Bute Primary	Treatment	Wajir	Wajir North	Yes
92	Furaha	Treatment	Wajir	Wajir East	Yes
93	ICF	Treatment	Wajir	Wajir East	Yes
94	Got Ade	Treatment	Wajir	Wajir East	Yes
95	Wajir Girls Primary	Treatment	Wajir	Wajir East	Yes
96	Makror	Treatment	Wajir	Wajir East	Yes
97	Kalkacha	Treatment	Wajir	Wajir East	Yes
98	Eldas	Treatment	Wajir	Eldas	Yes
99	Arbajahan	Treatment	Wajir	Wajir West	Yes
100	Hadado	Treatment	Wajir	Wajir West	Yes
101	Adamasajida	Treatment	Wajir	Wajir West	Yes
105	Kanjara Primary	Treatment	Wajir	Wajir West	Yes
107	Hodhan	Treatment	Wajir	Wajir East	Yes
117	Ndege	Treatment	Wajir	Habaswein	Yes
118	Malaba	Treatment	Wajir	Wajir North	Yes
1	Merrueshi	Control	Kajiado	Mashuuru	Yes
3	Ereteti Primary	Control	Kajiado	Isinya	No
5	Megumi Osilalei	Control	Kajiado	Mashuuru	No
6	Empakasi	Control	Kajiado	Isinya	No
9	Esilanke	Control	Kajiado	Kajiado North	No
11	Mwea	Control	Kiambu	Gatundu North	No
12	Mwihoko	Control	Kiambu	Ruiru	No
15	Gatamani	Control	Kiambu	Thika West	No
17	Wakaela	Control	Machakos	Mwala	No
19	Athi River	Control	Machakos	Athi River	No
21	Mwanga	Control	Machakos	Kathiani	No
23	Muslim Pri. Sch	Control	Nairobi	Starehe	No
25	Muthangari	Control	Nairobi	Westlands	No
26	St Martin Kibarage	Control	Nairobi	Westlands	No
29	Gatoto Community	Control	Nairobi	Embakasi	No
30	St Georges	Control	Nairobi	Westlands	No
31	Kirigu Primary School	Control	Nairobi	Dagoretti	No
32	Ngunyumu Centre School	Control	Nairobi	Mathare	No
37	Aga Khan	Control	Nairobi	Westlands	No
38	Kahawa Primary	Control	Nairobi	Kasarani	No
39	Riruta H G M Primary	Control	Nairobi	Dagoretti	No
40	Roysambu Primary	Control	Nairobi	Kasarani	No
41	Moi Forces Academy	Control	Nairobi	Kamukunji	No
42	Kabiria Primary	Control	Nairobi	Dagoretti	No
43	Marura Primary	Control	Nairobi	Mathare	No
51	Success Junior Centre	Control	Nairobi	Kasarani	No

Kenya					
School ID	School Name	Treatment Status	County	Subcounty	ALP
52	Bethlehem Community School	Control	Nairobi	Embakasi	No
55	St Agness Junior School Centre	Control	Nairobi	Embakasi	No
57	Mogra Star Academy	Control	Nairobi	Kasarani	No
58	Shalom Educational Centre	Control	Nairobi	Embakasi	No
61	Furaha Preparatory School	Control	Nairobi	Mathare	No
62	Plains View Community Centre	Control	Nairobi	Dagoretti	No
63	Little Angels Self Help Group	Control	Nairobi	Kasarani	No
64	Frank Educational Centre	Control	Nairobi	Dagoretti	No
66	Jowan Learning Centre	Control	Nairobi	Kasarani	No
71	Anajali Community Group	Control	Nairobi	Langata	No
72	Wamo Non Formal Education Centre	Control	Nairobi	Dagoretti	No
73	Spurgeons Academy	Control	Nairobi	Langata	No
76	Kibera Bible Baptist Church School	Control	Nairobi	Langata	No
79	St. John Pr.School Kibera	Control	Nairobi	Langata	No
81	Mathare Community Outreach Joy	Control	Nairobi	Starehe	No
83	Waruku Primary And Nursery	Control	Nairobi	Westlands	No
85	Kariobangi Adventist Education Centre	Control	Nairobi	Starehe	No
87	Excel Primary	Control	Nairobi	Westlands	No
88	Tender Heart Educational Center	Control	Nairobi	Embakasi	No
102	Bulla Forest	Control	Wajir	Wajir West	No
103	Ido Roble	Control	Wajir	Buna	No
104	Lolkuta South	Control	Wajir	Wajir West	No
106	Mansa	Control	Wajir	Tarbaj	No
108	Busbus	Control	Wajir	Wajir West	No
109	Lmd	Control	Wajir	Wajir West	No
110	Taqwa	Control	Wajir	Wajir West	No
111	Wargadud	Control	Wajir	Tarbaj	No
112	Qhajaja 1	Control	Wajir	Tarbaj	No
113	Meygag	Control	Wajir	Wajir South	No
114	Haragal	Control	Wajir	Tarbaj	No
115	Gurar	Control	Wajir	Wajir North	No
116	Dunto	Control	Wajir	Tarbaj	No
119	Malabow	Control	Wajir	Tarbaj	No
120	Elben	Control	Wajir	Tarbaj	No
121	Elmi	Control	Wajir	Wajir East	No

Table 14: Nigeria Baseline Sample School

Nigeria				
School ID	School Name	Treatment Status	LGA	ALP
1102	Jauben Yamma Primary School	Treatment	Bagwai	Yes
1108	Tuga Primary School	Treatment	Bagwai	Yes
1994	Majingini Nomadic Primary School	Treatment	Bagwai	Yes
1995	Tudara Primary School	Treatment	Bagwai	Yes
2113	Kasuwa Dogo Primary School	Treatment	Bebeji	Yes
2118	Unguar Yakubu li Primary School	Treatment	Bebeji	Yes
2991	Fandabba Nomadic Primary School	Treatment	Bebeji	Yes
2995	Mataki Primary School	Treatment	Bebeji	Yes
2997	Unguar Yakubu Primary School	Treatment	Bebeji	Yes
3119	Gwammaja Model Primary School	Treatment	Dala	Yes
3120	Hadaratul Islamiyya Primary School	Treatment	Dala	Yes
3122	Yahaya Bala Model Ps	Treatment	Dala	Yes
3123	Kurnar Asabe Islamiyya	Treatment	Dala	Yes
3126	Auwal Sani Mem Ps	Treatment	Dala	Yes
3127	Sabilu Rashad	Treatment	Dala	Yes
3128	Dala Noi Islamiyya Primary School	Treatment	Dala	Yes
3135	Isma'Lla Islamiyya Primary School	Treatment	Dala	Yes
3993	Abdulhamid Hassan Model Primary School	Treatment	Dala	Yes
4132	Redblock Islamiyya Primary School	Treatment	Dawakin Kudu	Yes
4136	Sheak D/Bauchi	Treatment	Dawakin Kudu	Yes
4137	Takai Primary School	Treatment	Dawakin Kudu	Yes
4138	Tsakuwa Central Primary School	Treatment	Dawakin Kudu	Yes
4995	Danidris Primary School	Treatment	Dawakin Kudu	Yes
5144	Sauna Primary School	Treatment	Gabasawa	Yes
5147	Yama Primary School	Treatment	Gabasawa	Yes
5148	Yautar Kudu Ps	Treatment	Gabasawa	Yes
5149	Yumbu Primary Schooll	Treatment	Gabasawa	Yes
5994	Tofai Primary School	Treatment	Gabasawa	Yes
6991	Lamire Central Primary School	Treatment	Garko	Yes
6993	Shuwo Primary School	Treatment	Garko	Yes
7154	Aminu Kano Islamiyya	Treatment	Kano Municipal	Yes
7156	Dambazau Sps Isl	Treatment	Kano Municipal	Yes
7159	Yakasai D/Z Isl	Treatment	Kano Municipal	Yes
7160	Taahud Islamiyya	Treatment	Kano Municipal	Yes
7178	Yakasai Model Primary School	Treatment	Kano Municipal	Yes
7993	B B Talle Islamiyya Primary School	Treatment	Kano Municipal	Yes
8166	Faran Islam 'A' Prim Sch	Treatment	Kibiya	Yes
8172	Saya-Saya Islamiyya Primary School	Treatment	Kibiya	Yes
8993	Kibiya Girls Child Education Primary School	Treatment	Kibiya	Yes
8995	Tarai Islamiyya Primary School	Treatment	Kibiya	Yes
8996	Unguar Gai Primary School	Treatment	Kibiya	Yes
9176	Butalawa Gawo Primary School	Treatment	Kura	Yes
9993	Irshadul-Ibad Al-Islamiyya Primary School	Treatment	Kura	Yes

Nigeria				
School ID	School Name	Treatment Status	LGA	ALP
10180	Madachi Islamiyya Primary School	Treatment	Rano	Yes
10183	Nurun Ala Nurun Islamiyya Primary School	Treatment	Rano	Yes
10185	Shangu Primary School	Treatment	Rano	Yes
10991	Ruwan Kanya Central Primary School	Treatment	Rano	Yes
10995	Zinatuddin Islamiyya Primary School	Treatment	Rano	Yes
11189	Fatima Zahrau Islamiyya Dokadawa	Treatment	Rimin Gado	Yes
11190	Indabo Islamiya Primary School	Treatment	Rimin Gado	Yes
11992	Bambara Islamiya Primary School	Treatment	Rimin Gado	Yes
11994	Yalwan Danziyal Science Model Primary School	Treatment	Rimin Gado	Yes
11996	Nurur Yakin Islamiyya Primary School	Treatment	Rimin Gado	Yes
12197	Diribo Central Primary School	Treatment	Takai	Yes
12199	Takai Islamiyya	Treatment	Takai	Yes
13991	Tahir Islamiyya Primary School	Treatment	Tarauni	Yes
13992	Ungwan Gano Special Primary School	Treatment	Tarauni	Yes
14207	Lambu Bakin Titi Islamiyya Primary School	Treatment	Tofa	Yes
14993	Gajida Nomadic Primary School	Treatment	Tofa	Yes
15210	Bachirawa Gabas Primary School	Treatment	Ungogo	Yes
15212	Gayawa Special Primary School	Treatment	Ungogo	Yes
15217	Miftahul Rashad Model Islamiyya Nps	Treatment	Ungogo	Yes
15219	Zaura Babba Central Primary School	Treatment	Ungogo	Yes
15991	Usman Bin Khalid Islamiya Primary School	Treatment	Ungogo	Yes
15992	Zainul Islam Primary School Chiromawa	Treatment	Ungogo	Yes
1105	Kwangwai Primary School	Control	Bagwai	No
1992	Aliyatul Islamiyya Primary School Romo	Control	Bagwai	No
1993	Gogori Islamiyya Primary School	Control	Bagwai	No
1996	Wuro-Bagga Central Primary School	Control	Bagwai	No
2110	Hayin Kurmi Primary School	Control	Bebeji	No
2992	Garauchi Primary School	Control	Bebeji	No
2993	Irshadil Aulad Islamiyya Primary School	Control	Bebeji	No
2994	Kasalle Primary School	Control	Bebeji	No
2996	Sabuwar Unguwa Islamiyya Primary School	Control	Bebeji	No
3992	Ma'Ahad Shiek Abubakar Maijalalani Islamiya	Control	Dala	No
3994	Madinatul Ahbab Salihu Mai Kassu Islamiyya Primary School	Control	Dala	No
3995	Madinatul Ahbab Yammata Islamiyya Primary School	Control	Dala	No
3996	Faqara'U Islamiyyah Primary School	Control	Dala	No
3997	Malikkafa Islamiyya Primary School	Control	Dala	No
4133	Sabon Garin Baba Islamiya	Control	Dawakin Kudu	No
4991	Dokawa Primary School	Control	Dawakin Kudu	No

Nigeria				
School ID	School Name	Treatment Status	LGA	ALP
4992	Sani Shehu Mai Hula Islamiyya Primary School Daginawa	Control	Dawakin Kudu	No
4993	Nasarawan Doya Primary School	Control	Dawakin Kudu	No
4994	Busaye Islamiyya Primary School	Control	Dawakin Kudu	No
5141	Mazauta Ps	Control	Gabasawa	No
5145	Unguwar Gabas Ps	Control	Gabasawa	No
5146	Yadai Ps	Control	Gabasawa	No
5992	Gambawa Primary School	Control	Gabasawa	No
5993	Malamawa Primary School	Control	Gabasawa	No
6992	Gurjiya Hurumi Primary School	Control	Garko	No
6994	Mijin Primary School	Control	Garko	No
7157	Ikirimimatul Adfal Nur & Primary School	Control	Kano Municipal	No
7158	Garul Hira Islamiyya	Control	Kano Municipal	No
7161	Tudun Nufawa Isl	Control	Kano Municipal	No
7991	Liman Dalhatu Islamiya Primary School	Control	Kano Municipal	No
7992	Waziri Gidado Islamiya Primary School	Control	Kano Municipal	No
7994	Madarasatul Izdihar Millati Islamiyya Primary School	Control	Kano Municipal	No
7995	Ramadaniyya Islamiyya Primary School	Control	Kano Municipal	No
8164	Binjar Primary School	Control	Kibiya	No
8170	Kwantaki Primary School	Control	Kibiya	No
8991	Durba Islamiyyah Primary School	Control	Kibiya	No
8992	Kalambu B Primary School	Control	Kibiya	No
8997	Bacha Masalaci Primary School	Control	Kibiya	No
9175	Butalawa Bakin Kogi Primary School	Control	Kura	No
9992	Rugar Duka Kawa Primary School	Control	Kura	No
10178	Jangaru Islamiyya Primary School	Control	Rano	No
10992	Farin Kwari Nomadic Primary School	Control	Rano	No
10993	Nurul Yakin Islamiyya Primary School	Control	Rano	No
10994	Taka Lafiya Primary School	Control	Rano	No
10996	Gwargo Primary School	Control	Rano	No
11191	Magajin Jili Islamiyya	Control	Rimin Gado	No
11991	Yango Primary School	Control	Rimin Gado	No
11995	Danbare Islamiyya Primary School	Control	Rimin Gado	No
11997	Yelwa Danziyal Islamiyya Primary School	Control	Rimin Gado	No
11998	Sabuwar Limawa Primary School	Control	Rimin Gado	No
12198	Gamawa Primary School	Control	Takai	No
12200	Takai Qur'Anic Primary School	Control	Takai	No
12992	Jibawa Islamiyya Primary School	Control	Takai	No
13205	Unguwa Uku Model	Control	Tarauni	No
13993	Hausawa Model Primary School	Control	Tarauni	No
13994	Almaawa Lilimi Islamiyya Primary School	Control	Tarauni	No

Nigeria				
School ID	School Name	Treatment Status	LGA	ALP
14991	Bashir Dalhatu Islamiya Primary School	Control	Tofa	No
14992	Garba Ilu Islamiya Primary School	Control	Tofa	No
15218	Sabon Gari Primary School	Control	Ungogo	No
15993	Salmanu Faris Islamiyya Primary School	Control	Ungogo	No
15994	Daihur Muktar Islamiyya Primary School	Control	Ungogo	No
15995	Musa Mohammed Primary School	Control	Ungogo	No

The sampling approach followed at the school, household and community level for both quantitative and qualitative instruments at baseline are summarised in Table 15.

Table 15. Instruments by sample size, respondent type and selection method

Tools	Sample size and respondent type and selection method
Quantitative tools	
School survey	<ul style="list-style-type: none"> One school survey was conducted per school either with head or deputy teacher of the school (for both treatment and control). <i>In treatment school, for the module on DLA trainings received the resource teacher was interviewed alongside the head teacher.</i>
Head count	<ul style="list-style-type: none"> One randomly selected class in primary 5 and 6 in Ghana and Nigeria. <i>Two head counts per school</i> One randomly selected class in primary 5, 6 and 7. <i>Three head counts per school</i>
Classroom observation + teacher assessment	<ul style="list-style-type: none"> One classroom observation per school in either an English or Math class in primary 5 (at baseline). The class selected for the observation will depend on the subject being taught at the time of the visit i.e. if at the time of arrival the next subject to be taught in primary 5 is English then the observation will take place in that class. Whether the class is taking place in regular classroom or the learning centre will be strictly driven by the timetable of the school at the time of the visit. In treatment schools, only DP-2 trained teachers who received the numeracy and literacy training either directly from DLA or through the step-down training approach will be observed at midline and endline. Additional trainings such as the Intensive Teacher Training (ITT) and Gender Responsive Pedagogy (GRP) will be key as well for the selection of the teacher.

Learning assessments (EGRA, EGMA and SEGMA)	<ul style="list-style-type: none"> 20 girls (21 girls in Kenya) are randomly selected using the primary 5 school register (across all sections of primary 5). Random number generator app was used to select girls that would make up the cohort for this evaluation.
Girls survey	<ul style="list-style-type: none"> 20 cohort girls (21 cohort girls in Kenya): <i>same cohort girls selected for the learning assessment were selected for the girls survey</i>
Household survey	<ul style="list-style-type: none"> 20 cohort girls (21 cohort girls in Kenya) households
Benchmark: Learning assessment (EGRA, EGMA, SEGMA and SEGMA)	<ul style="list-style-type: none"> Kenya: in all treatment schools, 5 girls each were randomly selected in primary 6 and 7 using the school register. The EGRA/EGMA and SEGMA/SEGMA assessment was administered to each girl. Ghana/Nigeria: in all treatment primary schools and corresponding JSS schools, 5 girls were randomly selected in primary 6 and JSS-1 using the school register. The EGRA/EGMA and SEGMA/SEGMA assessment was administered to each girl
Benchmark: Transition household survey	<ul style="list-style-type: none"> 10 schools were selected by the DLA country teams from the treatment schools that represent the different types of communities that are included in the sample. In the school catchment areas of the 10 schools, using snowball sampling approach, households that have children between the ages 11-15 years were identified and surveyed. A total of 10 households were surveyed in each school catchment area.
Qualitative instruments	
Interviews with head teachers and DLA resources teachers	<p>Nigeria: Six interviews with head teachers. The resource teachers were interviewed together with the head teacher at each school</p> <p>Kenya: Six interviews with head teachers. In one school, the deputy head teacher was interviewed because the HT was just appointed.</p> <p>Ghana: Six interviews with head teachers.</p>
Interviews with DLA trained teachers	<p>Nigeria, Kenya, Ghana: Six focus group discussions with three teachers each. Teachers were identified by the head teachers.</p>
Interviews with girls' club patrons/mentors	<p>Nigeria: Five interviews with one mentor per each interview as one school's girls club mentor had transferred to a different school</p> <p>Kenya: Five interviews with one mentor per each interview as one girl club mentor declined from being interviewed</p> <p>Ghana: Six interviews with one mentor per each interview</p> <p>Club mentors/patrons were identified by the head teachers.</p>
Rich picture exercise with girls and diaries	<p>Nigeria, Kenya and Ghana: Six rich picture exercises conducted in total with 7 girls in each group. Diaries were completed by all the girls. One diary was lost in Kenya. Girls were identified first through the quantitative sample of girls and randomly selected for the qualitative activities. If quantitative sample did not have girls attending the clubs then they were identified through the club and selected using hat method</p>

Rich picture exercise with boys	Nigeria and Ghana: Six rich picture exercises conducted in total with 7 boys in each group Kenya: Two rich picture exercises conducted in total with 7 boys in each group. Boys were identified through the boys' club and selected randomly. If there was no club at the school then boys were randomly selected from the year group of the majority of girls who were engaged in our activities
Interviews with community leaders	Nigeria: One interview in each community with the chief or Imam Kenya and Ghana: One interview in each community with the chief or deputy chief. Community leaders identified once the team was in the community.
Group interviews with community members	Nigeria and Ghana: Six focus group discussions with three members each Kenya: Five focus group discussions with three members each. In one community, one group declined from participating in the study. Community members were identified by the DP country teams
Interviews with cohort girls' parents	Nigeria: Five individual interviews and 12 group interviews of parents Kenya and Ghana: Five interviews of parents of girls Parents were first identified through the girls who participated in filling the diary in each schools when five out of seven girls were selected. Then parents were contacted either through mobile phones or through community members to seek their consent. Parents included fathers, mothers and other carers.
Interviews with representatives of MoE	Nigeria and Kenya: Two key-informant interviews with MOE representatives Ghana: In three districts, two MoE officials were interviewed individually; in other three districts, 2 MoE officials were interviewed together MOE representatives were identified by the DLA country officers.

The total sample size achieved per instrument and by country is presented in Table 16.

Table 16. Baseline sample size, by instrument

Tools	Nigeria	Ghana	Kenya
Quantitative tools			
School survey	127	120	121
Head count	Primary 5: 115 Primary 6: 109	Primary 5: 113 Primary 6: 97	Primary 5: 114 Primary 6: 115 Primary 7: 115
Classroom observation + teacher assessment	127	120	121
Learning assessments (EGRA, EGMA and SEGMA)	2, 306	1, 965	2, 392

Girls survey	2,289	1,965	2,392
Household survey	2,256	1,960	2,134
Benchmark: Learning assessment (EGRA, EGMA, SEGRA and SEGMA)	Primary 6: 312 JSS-1: 436	Primary 6: 310 JSS-1: 317	Primary 6: 291 Primary 7: 287
Benchmark: Transition household survey	201	166	135
Qualitative instruments			
Interviews with head teachers and DLA resources teachers	6	6	6
Interviews with DLA trained teachers	6	6	6
Interviews with girls' club patrons/mentors	5	6	5
Rich picture exercise with girls and diaries	6 RPE and 42 diaries	6 RPE 42 diaries	6 RPE 41 diaries
Rich picture exercise with boys	6	6	2
Interviews with community leaders	4	6	6
Group interviews with community members	6	6	5
Interviews with cohort girls' parents	35	30	30
Interviews with representatives of MoE	2	9	2

A total of 18 group activities with girls and 14 with boys were conducted across the countries and 125 diaries were written by the cohort girls. At the community level, a total of 128 interviews were held with

community members, whereas at school and system levels we had 52 interviews with schools staff and 13 interviews with the representatives of the Ministries of Education. Table 17 summarizes the details.

Table 17: Detailed breakdown of qualitative sample

	Instrument	N of participants per school/ community	Total N conducted in 5 LGAs	N of participants per school/ community	Total N conducted in 6 counties	N of participants per school/ community	Total N conducted in 6 counties	Total N across three countries
		Nigeria		Kenya		Ghana		
Cohort Girls	Rich picture exercise	1	6	1	6	1	6	18
	Diary	7	42	7	41	7	42	125
Cohort boys	Rich picture exercise	7	6	1	2	1	6	14
Community Leaders	Semi-structured interviews	1	4	1	6	1	6	16
	Group interview	1	6	1	5	1	6	17
Parents	Semi-structured interviews	5	35	5	30	5	30	95
Head Teacher	Semi-structured interviews	1	6	1	6	1	6	18
Girl club Mentor	Semi-structured interviews	1	5	1	5	1	6	16
Teacher	Semi-structured interviews	1	6	1	6	1	6	18
MOE	Semi-structured interviews	-	2	-	2	2	9	13

Annex 11: Control group approach validation

The purpose of this annex serves to reflect on the adequacy of the learning and transition cohort samples, particularly the control group one, for the evaluation of outcomes at midline and endline.

Approach to selecting treatment and control group

The impact evaluation is designed to provide a representative sample of project schools to enable a country-level analysis of impact, i.e. the samples will not be representative of the country as a whole, only the targeted intervention areas. Specifically Ghana's Northern Region, Kano State in Nigeria, greater Nairobi schools in and around the city's informal settlements, and the counties of Wajir, Machakos, and Kajiado in Kenya.

Taking into account DP-2 implementation approach², we employed a multi-stage cluster random assignment strategy, which considers schools as the **Primary Sampling Unit (PSU)**, from which teachers and students were randomly selected to be part of the evaluation sample. A master sampling frame was constructed using EMIS data for each country (which includes all schools in the evaluation areas including both treatment and potential control schools) and a list of all DP-2 intervention schools.³

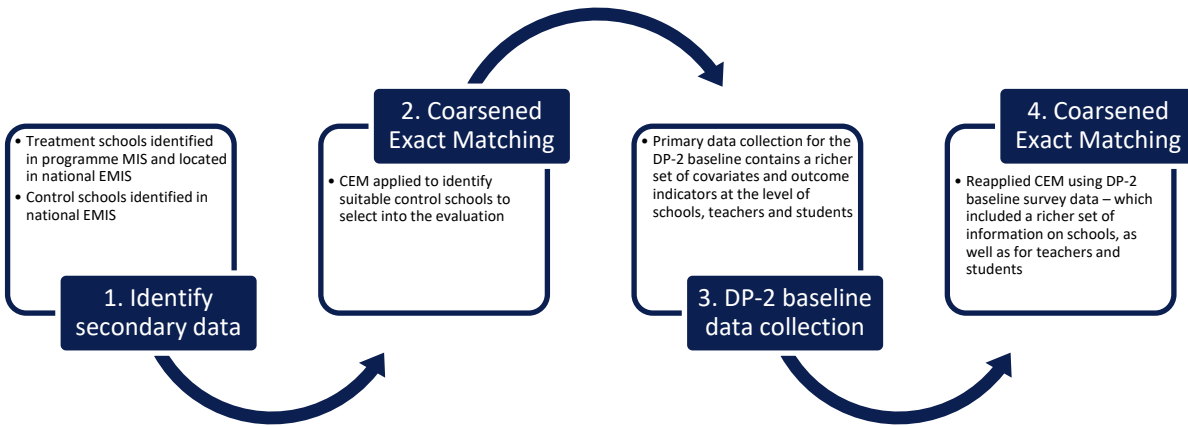
Given that random assignment of treatment and control schools was not feasible for DP-2, we expect there to be systematic differences between the average treatment and average control school. To improve the chances of identifying a set of control schools that can form an appropriate counterfactual our random selection of control schools was bolstered by matching using the CEM approach. Figure 1 presents steps taken to reach a balanced school sample for this evaluation; this was done in two stages.

Figure 1. Steps to defining a balanced sample



² DP-2 implementation has prior to this evaluation purposively selected intervention schools on the basis of geographic proximity and the necessary local MoE support structures

³ The master sampling frame was refined further by taking into account 'zones of exclusion' around treatment schools to avoid the potential for spill over effects; by mapping out schools that were receiving 'other GEC-T interventions' and 'other GEC-T programme control school'.



The **first stage** of matching used CEM to match treatment and control schools on a set of indicators available in the EMIS data. These indicators varied slightly by country depending on the availability and completeness of the secondary data (i.e. EMIS data). Table 18, lists the variables used for matching using the EMIS data.

Table 18: Pre-baseline CEM match indicators

Country	Nigeria	Kenya	Ghana
Indicators	Boys enrolment Girls enrolment Local government administration School location (<i>urban/rural</i>) Type of school (<i>religious/public</i>)	Boys enrolment Girls enrolment County Access to electricity	Boys enrolment Girls enrolment District

Utilising the respective variables in Table 18, treatment and control schools were then randomly selected in pairs, with each pair of schools having a broadly similar set of characteristics based on CEM. This approach was necessary to greatly reduce the chances of selecting control schools into the evaluation sample that would have to be dropped during the analysis stage because of significant statistical dissimilarities with all treatment schools in the evaluation sample. Using this approach the final sample of schools were selected before baseline. For each country, we selected 120 schools – 60 treatment and 60 control.

However, when visiting selected schools based on the CEM pairing approach we had to drop and replace a significant number of schools across the three countries for a number of reasons. These include: (i) due to insufficient number of girls enrolled in primary 5; (ii) schools with no primary 6 grade; and (iii) errors in matching school names (due to mismatch spelling) between the EMIS data and DP-2 treatment schoolmaster list. See section 2.5 in the report for the detailed challenges faced with regards to each. Although some of these challenges had more logistical effects, the issue of not having sufficient girls enrolled in primary 5 could result in potential bias in the sample due to exclusion of smaller schools. Attaining 20/21 girls per school was a big challenge across the majority of school in the three countries, particularly in Ghana. Overall enrolment number for girls in primary 5 were very low and in other cases although more than 20/21 girls were enrolled the majority were not in attendance during the date of our visit. See Table 19 for the final sample size achieved at baseline for school and girl level. Relative to the other countries primary 5 enrolment numbers for girls were lower, therefore we were not able to achieve

the required sample size of 2,400 cohort girls as shown in Table 19. In order to mitigate this issue, we oversampled in schools where the number of girls enrolled were higher, however we were only able to achieve a sample size of 1,965 cohort girls. Attrition levels in Ghana will need to be closely monitored and mitigated at midline as a result of the sample size achieved at baseline.

Table 19: Sample size required and achieved at baseline

		Target sample size per country		Sample size accounting for 30% attrition for Ghana/Nigeria and (40% for Kenya)		Achieved Sample at Baseline	
		Schools	Girls	Schools	Girls	Schools	Girls
Kenya	<i>Treatment</i>	60	900	60	1,260	60	1,264
	<i>Control</i>	60	900	60	1,260	61	1,128
	Total	120	1,800	120	2,520	121	2,392
Ghana	<i>Treatment</i>	60	900	60	1,200	61	1,051
	<i>Control</i>	60	900	60	1,200	58	914
	Total	120	1,800	120	2,400	119	1,965
Nigeria	<i>Treatment</i>	60	900	60	1,200	65	1,182
	<i>Control</i>	60	900	60	1,200	62	1,107
	Total	120	1,800	120	2,400	127	2,289

The **second stage** of matching was applied following the baseline data collection. The baseline data contains a much richer set of covariates on which to perform matching. As per the evaluation matrix presented in Annex 6 defines that we will quantitatively seek to identify the impact of the DP-2 programme at various levels of educational achievement including for girls (e.g. learning outcomes, transition, self-efficacy); and teachers (e.g. changes in pedagogy). As such we applied the CEM at various levels:

- **Matching of treatment and control girls:** using information collected during the baseline survey we applied CEM to match treatment and control girls on a range of indicators at various levels including school; teacher; classroom; student; primary caregiver; and household.
- **Matching of treatment and control teachers:** using information collected during the baseline survey we applied CEM to match treatment and control teachers on a range of indicators at various levels including school and teacher.

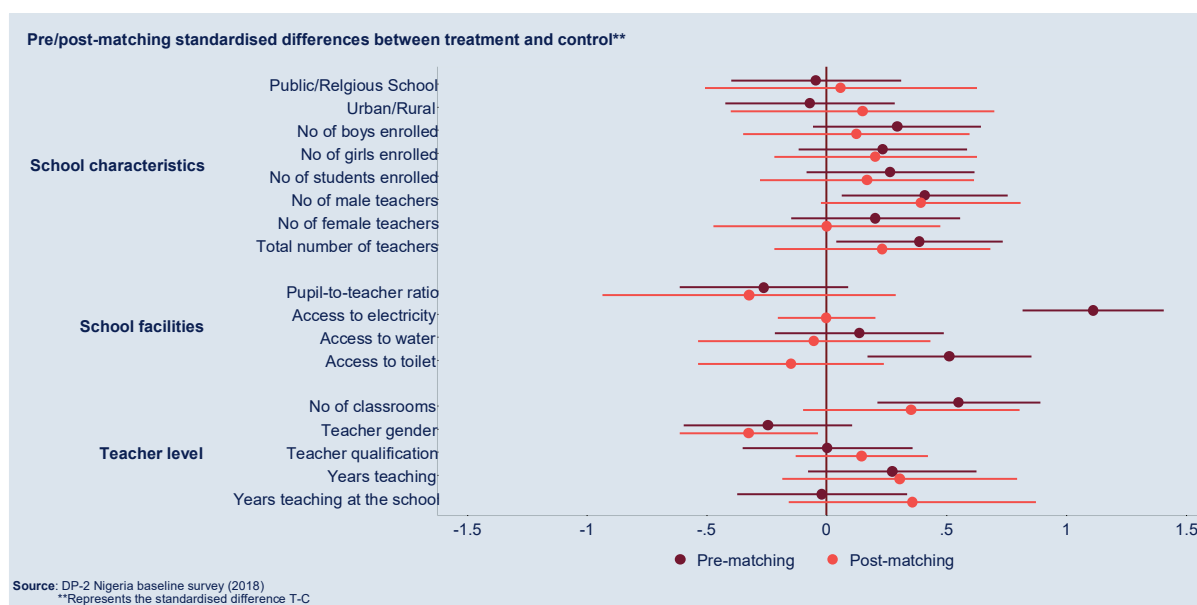
Treatment and Control Sample Comparability

Below we present the pre/post matching differences between treatment and control schools on a number of covariates for each country by applying CEM at the teacher and girl level. The graphs show point estimates for pre/post matching and 95% confidence intervals. When the confidence interval does not overlap with zero, this is an indication that a statistically significant relationship exists between the covariate and the treatment assignment, however, if the confidence interval overlaps with zero, then this is an indication that there is no statistically significant difference between the covariate and the treatment assignment.

Post matching balance was achieved for treatment and control groups at the teacher and girl level for the majority of the covariates, in each country. Achieving balance on all covariates was not possible, without compromising the over sample size and power of the evaluation. However, we are confident in the balance achieved between treatment and control groups for this evaluation. We will control for any of the imbalance observed for some of the covariates at midline and endline through robustness and sensitivity analysis checks.

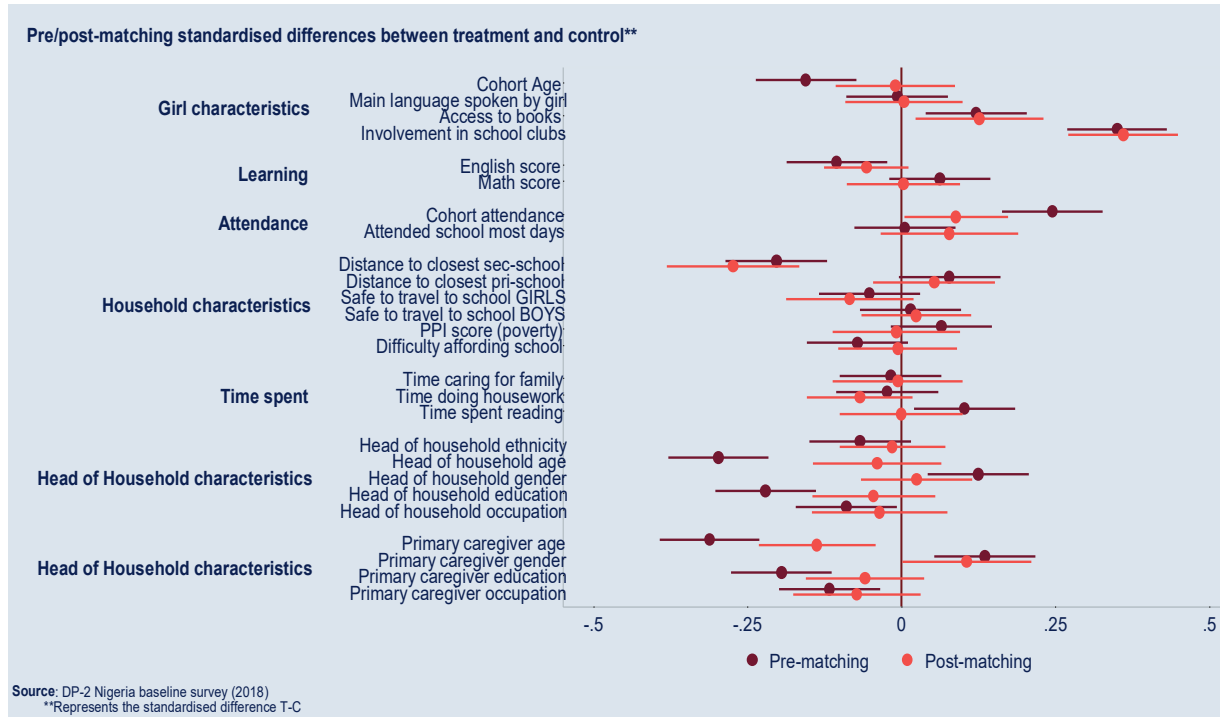
For Nigeria, at the teacher level (see Figure 2) the sample is balanced on school characteristics, facilities and on the majority of classroom teacher characteristics with the exception of **teacher gender**.

Figure 2: Nigeria CEM – at the Teacher Level



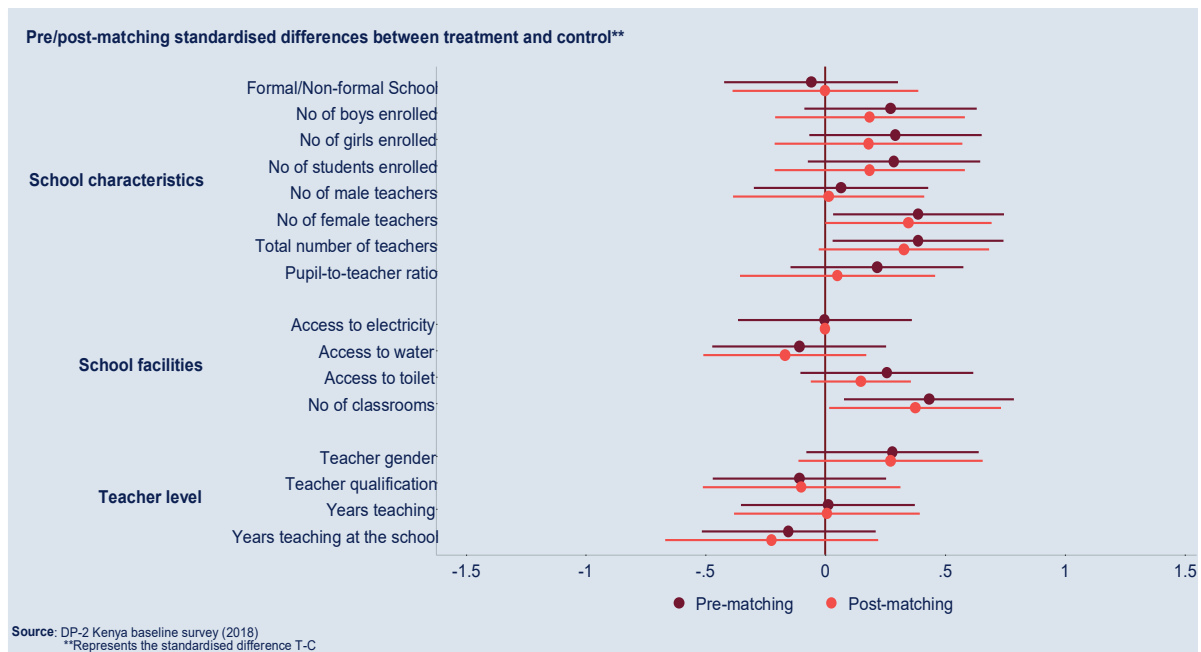
At the girl level (see Figure 3), treatment and control groups are balanced on majority of indicators with the exception of **access to books, cohort attendance distance to the closest secondary school, primary caregiver age and gender**.

Figure 3: Nigeria CEM – at the Girl Level



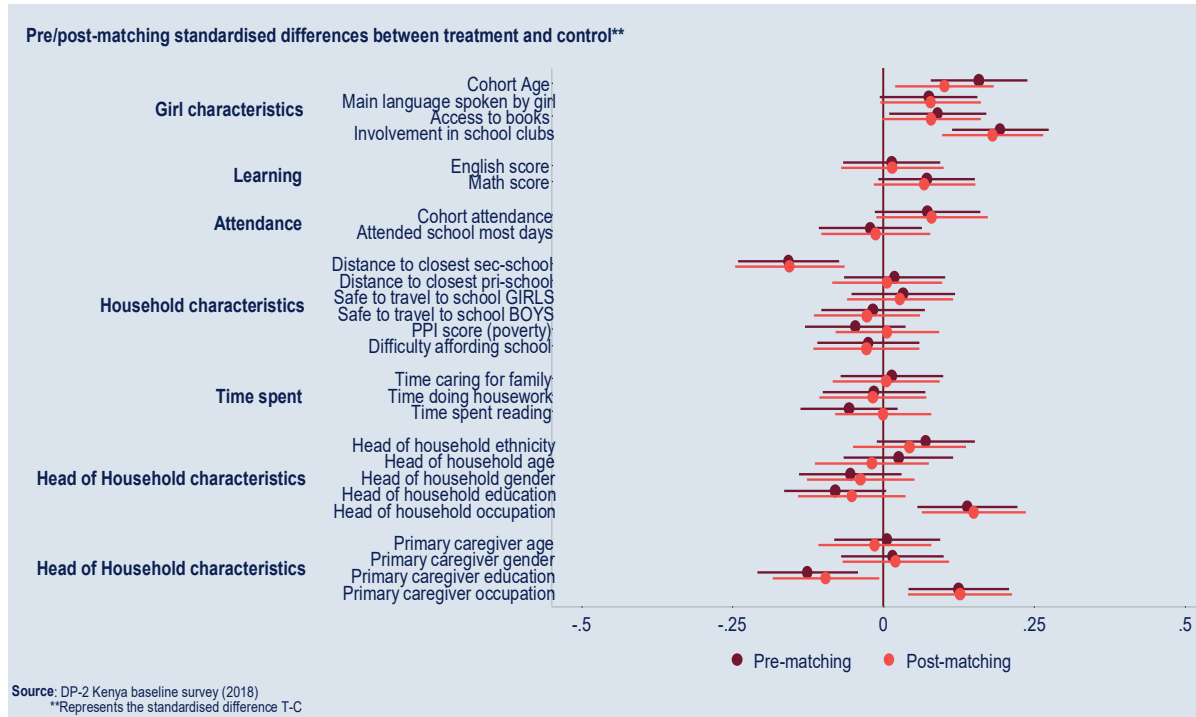
For Kenya, at the teacher level (see Figure 2) the sample is balanced on school characteristics, teacher characteristics and the majority of school facilities except **number of classrooms**.

Figure 4: Kenya CEM – at the Teacher Level



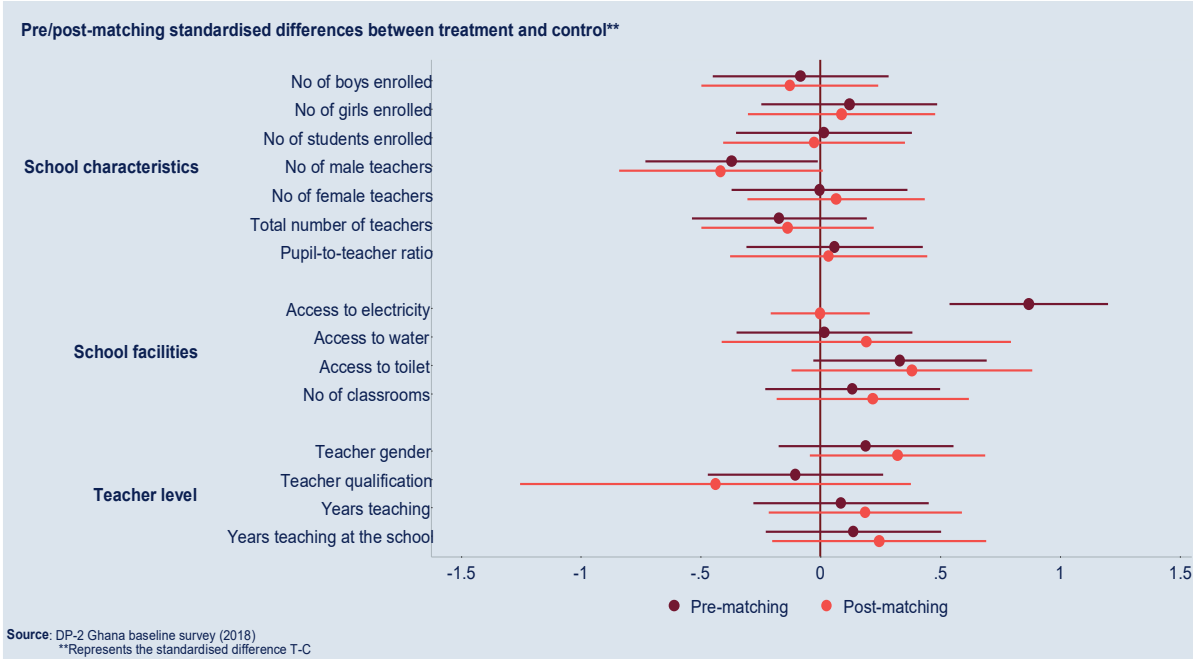
At the girl level (see Figure 5), treatment and control groups are balanced on all indicators besides the **age of cohort girl, involvement in clubs, distance to the closest secondary school, primary caregiver education, and primary caregiver and head of household occupation.**

Figure 5: Kenya CEM – at the Girl Level



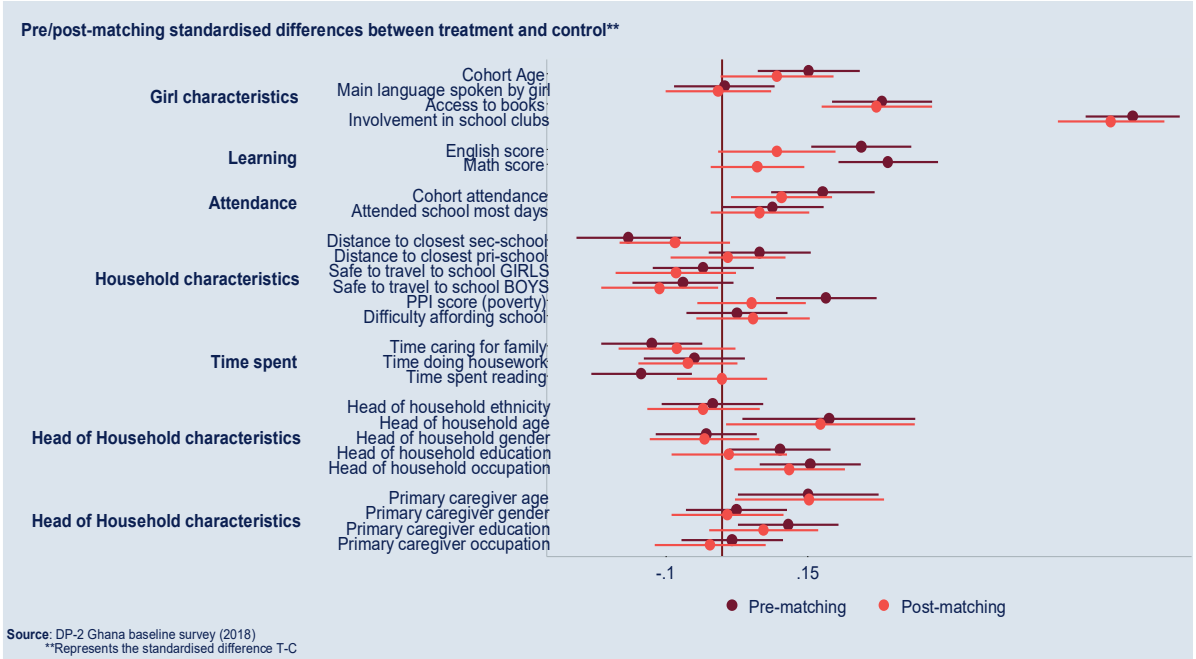
For Ghana, at the teacher level (see Figure 6Figure 2) the sample is balanced on school characteristics, facilities and teacher characteristics.

Figure 6: Ghana CEM – at the Teacher Level



At the girl level (see Figure 7), treatment and control groups are balanced on all indicators besides, **access to books, cohort attendance, involvement in clubs, safe travel to school for boys, head of household occupation and primary caregiver and head of household age.**

Figure 7: Ghana CEM – at the Girl Level



Treatment and control group differences by key characteristics as per Chapter 3

In this section, we present and comment on the tables displaying intervention and control samples composition by region, age, grade and the subgroups identified in Chapter 3 of the report. At the Fund Manager's request we have tested for statistical significance by different sub-groups. However, it is essential to state that the sample size for this evaluation was not designed to be balanced within sub-groups but rather to be balanced overall.

By region

Table 20 shows the breakdown of the evaluation sample by region across the three countries. The evaluation sample was not designed to be balanced by region but balanced overall for each country on some critical indicators that effect the outcomes of interest.

Table 20: Evaluation sample breakdown (by region)

	Intervention (Baseline)	Control (Baseline)
Nigeria: Sample breakdown by Local Government Administration (LGA) (% of sample)		
Bagwai	5.5	5.2
Bebeji	6.6	7.9
Dala	14.3***	6.0
Dawakin Kudu	8.1	7.6
Gabasawa	7.5	9.4
Garko	2.9	2.3
Kano Municipal	8.8***	13.6
Kibiya	7.9	6.4
Kura	3.4**	6.2
Rano	7.5	5.7
Rimin Gado	7.5	8.0
Takai	3.4**	5.9
Tarauni	3.5***	6.4
Tofa	2.7	4.4
Ungogo	10.3***	5.2
Total (sample size)	100 (N = 1,140)	100 (N = 1,047)
Kenya: Sample breakdown by county (% of sample)		
Kajiado	8.4	10.2
Kiambu	5.0	5.3
Machakos	5.0	5.5
Nairobi	55.7***	62.6
Wajir	25.9***	16.3
Total (sample size)	100 (N = 1,226)	100 (N = 1,093)
Kenya: Sample breakdown by sampling strata (% of sample)		
Formal schools	33.0*	36.8
Non-formal schools	32.6**	36.6
Semi-arid/arid regions	34.3***	26.6
Total (sample size)	100 (N = 1,226)	100 (N = 1,093)
Ghana: Sample breakdown by district (% of sample)		
Central Gonja	6.4***	2.6
East Gonja	10.8***	5.7
Karaga	7.7***	1.3
Sagnarigu	13.7***	18.6
Savelugu	9.4	10.5
Tamale Metro	22.0**	27.7

	Intervention (Baseline)	Control (Baseline)
Tolon	8.5**	5.4
West Mamprusi	10.4***	22.7
Yendi	11.3***	5.4
Total (sample size)	100 (N = 1,003)	100 (N = 860)

Source: DP2 girl survey 2018

Stars indicate that means between intervention and control groups differ significantly from one another at the following levels: *** p<.001, ** p<.05, * p<.01.

By age

Table 21 shows the breakdown of the evaluation sample by age. The evaluation sample was not designed to be balanced by age group but balanced overall on age and other key indicators.

Table 21: Evaluation sample breakdown (by age)

	Intervention (Baseline)	Control (Baseline)	Intervention (Baseline)	Control (Baseline)	Intervention (Baseline)	Control (Baseline)
	Nigeria (%)		Kenya (%)		Ghana (%)	
Aged 6-8	3.3	3.0	0.2	0.1	0.4*	1.2
Aged 9-11	54.1***	45.4	62.9**	67.6	22.4	24.8
Aged 12-13	32.3	35.3	30.1	28.5	50.3	50.3
Aged 14-15	8.9**	12.5	6.6**	3.5	21.5	18.4
Aged 16-17	1.2**	2.8	0.2	0.2	3.3	3.4
Aged 18-19	0.2***	0.9	0.0	0.0	0.4*	0.4
Aged 20+	0.0	0.0	0.0	0.0	0.1	1.5
Missing	0.0	0.2	0.1	0.2	1.5	0.0
Total (sample size)	100 (N = 1,140)	100 (N = 1,047)	100 (N = 1,226)	100 (N = 1,093)	100 (N = 1,003)	100 (N = 860)

Source: DP2 girl and household survey 2018

Notes: Age is self-reported by the girl, except in cases where the girl did not know her age. In those cases, age is reported by the caregiver. When caregivers also did not know the girl's exact age, they were asked to estimate the age group that the girl falls into. In a small percentage of cases in Nigeria and Ghana, the caregiver was also unable to estimate the age group that the girl falls into. Stars indicate that means between intervention and control groups differ significantly from one another at the following levels: *** p<.001, ** p<.05, * p<.01.

By disability

Table 22 presents the breakdown of the evaluation sample by disability status as reported by (i) the primary caregiver of the cohort girl via the household survey and (ii) the cohort girl via the girls survey. We report on two different disability thresholds: Definition 1 refers to girls with difficulty in at least one domain recorded as 'some difficulty', 'a lot of difficulty' or 'cannot do at all', while definition 2 refers to girls with difficulty in at least one domain recorded as 'a lot of difficulty' or 'cannot do at all'.

The level of disability among girls in the sample is balanced among both treatment and control groups (no statistically significant differences), for both thresholds of disability (i.e. definition 1 and 2) based on the primary caregiver's report of the cohort girl's disability status (HH survey) across the three countries. Disaggregated by the different types of disabilities, we find **some statistically significant differences**, mainly for disability status reported by the cohort girl. For definition 1, we note statistically significant differences in Kenya and Ghana, and for definition 2, only in Ghana. Although these differences exist we need to apply caution in how to interpret these differences for the following reason (also discussed in chapter 3 of the report):

- The World Report on Disability (2011⁴) notes that reporting of child disability by parents or caregivers may not always accurately represent the experience of the child. However, it is also possible that children may interpret answer categories such as ‘*some difficulty*’ or ‘*a lot of difficulty*’ differently to parents. For example, we find more significant differences between child and caregiver reports when looking at disability rates using definition 1 (which includes ‘*some difficulty*’) compared to definition 2. In Ghana, the difference between child and caregiver reports is driven primarily by a larger proportion of children who report that they have difficulties remembering things or concentrating (cognitive impairment). Given that children may experience these types of difficulties particularly while at school, it is possible that caregivers may not be aware of their children’s difficulties. Given that these questions were administered to pupils while at school, it is also possible that the school context could have made difficulties in remembering or concentrating more salient and these may not have always represented a cognitive disability due to health problems.
- Based on our use of the recommended definition of disability, only a small proportion of the cohort girls have a disability at baseline. Therefore, it is highly likely that this sample would not be representative of the full proportion of girls with a disability, and any conclusions that would be drawn from the presented results are more than likely to be misleading.

In order to account for some of these differences, we will conduct robustness tests during the impact analysis at endline including covariates which we did not achieve balance for at baseline.

Table 22: Evaluation sample breakdown (by disability)

Sample breakdown (Girls)	Intervention (HH survey) (Baseline)	Control (HH survey) (Baseline)	Intervention (Girl survey) (Baseline)	Control (Girl survey) (Baseline)
Nigeria: Sample breakdown by disability (% of sample)				
Definition 1: ‘some difficulty’, ‘a lot of difficulty’ or ‘cannot do at all’				
Girls with disability (overall)	7.4	6.0	15.4	13.4
Vision impairment	2.1	1.2	4.6***	2.3
Hearing impairment	1.8	2.1	2.7	3.2
Mobility impairment	1.6	2.0	3.1	2.2
Cognitive impairment	1.7	0.9	6.6	5.4
Self-care impairment	0.8***	0.1	2.6***	0.8
Communication impairment	0.3	0.3	1.8**	0.7
Definition 2: ‘a lot of difficulty’ or ‘cannot do at all’				
Girls with disability (overall)	0.9	1.4	2.5	2.8
Vision impairment	0.4	0.3	1.1**	0.3
Hearing impairment	0.0	0.2	0.2	0.5
Mobility impairment	0.4	0.9	0.6	0.9
Cognitive impairment	0.0	0.0	0.7	0.6
Self-care impairment	0.2	0.0	0.8	0.5
Communication impairment	0.0	0.0	0.3*	0.0

⁴ World Health Organization (2011) World Report on Disability.

Sample breakdown (Girls)	Intervention (HH survey) (Baseline)	Control (HH survey) (Baseline)	Intervention (Girl survey) (Baseline)	Control (Girl survey) (Baseline)
Sample size (N)	1,126	1,028	1,140	1,047
Kenya: Sample breakdown by disability (% of sample)				
Definition 1: 'some difficulty', 'a lot of difficulty' or 'cannot do at all'				
Girls with disability (overall)	21.5	22.8	32.2*	35.9
Vision impairment	9.6	11.4	13.1**	16.2
Hearing impairment	3.2	3.9	6.2	5.3
Mobility impairment	2.8	2.3	3.2	3.3
Cognitive impairment	6.5	7.1	12.9	14.2
Self-care impairment	1.6	1.8	2.2	2.2
Communication impairment	2.0	1.9	6.5	7.5
Definition 2: 'a lot of difficulty' or 'cannot do at all'				
Girls with disability (overall)	3.3	3.1	5.7	5.5
Vision impairment	1.2	1.2	2.2	2.2
Hearing impairment	0.6	0.6	0.8	0.7
Mobility impairment	0.2	0.1	0.5	0.2
Cognitive impairment	1.1	0.9	1.8	1.5
Self-care impairment	0.4	0.3	0.5	0.4
Communication impairment	0.3	0.2	0.7	1.0
Sample size (N)	1,091	971	1,226	1,093
Ghana: Sample breakdown by disability (% of sample)				
Definition 1: 'some difficulty', 'a lot of difficulty' or 'cannot do at all'				
Girls with disability (overall)	17.8	15.5	42.7*	38.4
Vision impairment	4.1	4.2	7.9	7.9
Hearing impairment	3.9	4.3	5.9	7.0
Mobility impairment	2.4	1.9	6.4	4.8
Cognitive impairment	8.5***	4.5	31.7*	27.8
Self-care impairment	0.8*	0.2	2.6	1.6
Communication impairment	2.1	2.1	4.8	6.3
Definition 2: 'a lot of difficulty' or 'cannot do at all'				
Girls with disability (overall)	2.1	2.1	10.3**	7.4
Vision impairment	0.4	0.5	0.8	0.7
Hearing impairment	0.1	0.1	0.7	0.5
Mobility impairment	0.4	0.5	0.6	0.2
Cognitive impairment	0.9	0.9	8.3**	5.9
Self-care impairment	0.1	0.0	0.1	0.5
Communication impairment	0.6	0.3	0.4	0.4
Sample size (N)	998	859	1,003	860

Source: DP2 girl and household survey 2018

Notes: Respondents identified as having a disability include those with difficulty in at least one domain recorded as 'some difficulty', 'a lot of difficulty' or 'cannot do at all' for Definition 1, and difficulty in at least one domain recorded as 'a lot of difficulty' or 'cannot do at all' for Definition 2. Stars indicate that means between intervention and control groups differ significantly from one another at the following levels: *** p<.001, ** p<.05, * p<.01.

By girls' characteristics

Table 23 presents the characteristics of girls in the evaluation sample across the three countries

- In Nigeria, **statistically significant differences were observed in three out 17 girls' characteristic indicators** (i.e. *primary caregiver has no education, mothers under 18 and 16*).

Although, differences were observed *specifically for primary caregivers having no education* the pre/post matching at the girl level (see Figure 3) achieved balance for level of education for the primary caregiver. Therefore, the differences noted here might be driven by smaller sample size and should not be a concern since balance was achieved on the overall primary caregiver education indicator. For the other two indicators cohort girls who are ‘mothers under 18 and 16’ given the extremely small sample size (less than 1%), these differences are negligible.

- In Kenya, statistically significant differences were observed in three out of 17 girls’ characteristic indicators (*i.e. girl does not speak Lol, head of household and primary caregiver has no education*). Pre/post matching at the girl level (see Figure 5), shows that head of household education level balance has been achieved. However, this is not the case for primary caregiver education level. Taking into account that both variables (*i.e. girl does not speak Lol and primary caregiver has no education*) have potential effects on a child’s learning ability, we will control for these specific covariates during the impact analysis at endline and further undertake robustness tests.
- In Ghana, statistically significant differences were observed in three out of 17 girls’ characteristic indicators (*i.e. double orphan, language of instruction is different from mother tongue and living with one parent*). Given the small proportion of cohort girls that are double orphaned (less than 2%), the differences noted for this indicator are negligible. The majority of cohort girls (over 95%) across both treatment and control groups reported that the Lol is different from their mother tongue. Although, the difference is statistically significant the difference in magnitude is relatively small. We will run robustness tests and control for these specific covariates during the impact analysis at endline.

Table 23: Girls' characteristics

	Nigeria		Kenya		Ghana	
	Intervention (%)	Control (%)	Intervention (%)	Control (%)	Intervention (%)	Control (%)
Single orphan	8.8	8.0	11.9	11.0	8.9	9.4
Double orphan	0.5	0.7	1.0	0.8	1.3*	0.5
Living without both parents	5.9	5.5	10.2	10.3	20.9	17.8
Living in female headed household	5.1	4.9	33.4	31.5	9.9	9.0
Married	0.0	0.0	0.2	0.1	0.1	0.1
Mother (under 18)	0.4*	0.0	0.3	0.4	0.2	0.3
Mother (under 16)	0.4*	0.0	0.3	0.4	0.2	0.4
Difficult to afford for girl to go to school	23.2	22.5	64.6	65.5	75.2	72.8
Household does not own land for themselves	41.3	40.6	38.1	39.4	57.1	56.5
Extreme poverty rate (based on poverty line of \$1.90 / day)	24.2	24.1	25.3	25.7	8.4	8.9

	Nigeria		Kenya		Ghana	
	Intervention (%)	Control (%)	Intervention (%)	Control (%)	Intervention (%)	Control (%)
Poverty rate (based on poverty line of \$3.10/day)	57.3	57.1	45.9	45.7	25.8	26.8
Language of instruction is different from mother tongue	12.3	13.5	91.8	90.8	96.8*	94.8
Girl does not speak language of instruction	1.7	1.4	8.1***	4.8	9.3	11.5
Head of household has no education	42.0	42.9	27.8**	23.7	70.8	72.2
Primary caregiver has no education	44.3**	38.7	29.4**	24.2	75.1	77.1
Living with one parent only	9.6	9.5	27.5	28.5	15.7**	12.2
Rural location	64.4	67.6	-	-	-	-
Sample size (N)	1,126	1,028	1,091	971	998	859

Source: DP2 household survey 2018. All indicators are reported by caregivers.

Notes: (1) Language of instruction refers to the language in which caregivers report that their child is learning in at school. This can be different from the language policy of the country. (2) The poverty rate is calculated by averaging the poverty likelihood that the PPI scorecard assigns to each household. (3) Rural or urban location was based on the school's location that the cohort girl attends as reported in EMIS data. This information was available for Nigeria only. (4) Stars indicate where means between intervention and control groups differ significantly from one another at the following levels: *** p<.01, ** p<.05, * p<.01.

By barriers to learning and transition

Table 24 shows the proportion of girls in the sample who face each of these potential barriers to learning and transition. The statistically significant differences observed between treatment and control schools with regards to school facilities are a reflection of the way DP implements and the way we have sampled, i.e. worse off schools. In light of these differences, we will include control school covariates in our impact analysis to control for some of the unbalances noted in Table 24.

Table 24: Potential barriers to learning and transition⁵

	Nigeria		Kenya		Ghana	
	Intervention (%)	Control (%)	Intervention (%)	Control (%)	Intervention (%)	Control (%)
Home/community level						
Safety and distance to school						
Fairly or very unsafe travel to schools in the area (caregiver report) [^]	1.8	2.9	16.8	16.2	6.7	7.8
Doesn't feel safe travelling to/from school (girl report)	7.7	7.1	9.5	8.6	8.1***	5.1
Closest primary school is further than 30 min walk away [^]	6.4	6.9	9.9	9.8	9.3	8.6
Closest secondary school is further than 30 min walk away [^]	37.9***	47.0	30.0	32.7	62.5	62.1
Household chores						

⁵ The proposed template included a section on teachers and teaching quality, attendance and parental/community support. These factors and their relationship with girls' characteristics and other barriers are discussed in detail in Chapter 5 as intermediate outcomes of the project.

	Nigeria		Kenya		Ghana	
	Intervention (%)	Control (%)	Intervention (%)	Control (%)	Intervention (%)	Control (%)
High chore burden (spends a quarter of the day / a few hours or more on chores) [^]	37.8	38.8	15.2	17.9	35.9*	40.7
Helps with agricultural work, family business or work outside the home [^]	66.7	67.8	16.9	19.3	78.7*	82.4
School level						
Safety at school						
Doesn't feel safe at school	6.9	6.7	3.5	3.8	4.3	3.5
School facilities						
Pupil teacher ratio (PTR) over 40	72.0***	80.7	37.8***	24.7	24.5	22.1
Proportion of unqualified teachers	8.3***	12.9	13.2	14.7	4.7***	10.2
School has no female teachers	44.0***	63.3	4.6	4.7	4.8***	13.3
School does not have access to water	19.4	20.6	3.3***	0.9	9.6	8.1
School does not have separate toilets for girls	27.9***	55.1	1.7***	3.3	11.0***	23.8
School does not have access to electricity	9.8***	62.2	2.0	1.3	8.7***	43.7
School had at least one day without electricity in last 5 days (of schools with electricity)	72.8***	80.8	35.9***	43.2	48.7***	17.3
Sample size for indicators from household survey (marked with [^]) (N)	1,126	1,028	1,091	971	998	859
Sample size for indicators from girl or school survey (N)	1,140	1,047	1,226	1,093	1,003	860

Source: DP2 girl, household and school 2018

Notes: (1) A teacher was considered unqualified if their highest level of education was 'incomplete secondary' or 'completed secondary'. (2) Access to electricity refers to access from any source, including the national grid, generators, solar panel or any other source. (2) Stars indicate that means between intervention and control groups differ significantly from one another at the following levels: *** p<.01, ** p<.05, * p<.01.

Potential risks to comparability of treatment and control groups

Contamination and/or Spillover effects

The risks of contamination or spillover effects are relatively high in urban areas across all the three countries, particularly in non-formal schools in Kenya. In rural areas, due to the distances between schools the risk of spillover effects are lower. Spillover effects could take place at the school level driven by the high teacher transfer rate in all three countries. Teacher transfers are governed by the MoE policy and is outside the control of the project. During DP-1, the evaluation found high teacher transfer rates in all three countries, which resulted in cases where DP trained teachers were found teaching in schools designated as control. According to the DP team, MOUs have been signed with local MOE to limit the transfer of teachers within the project intervention period. However this has not always been easy to maintain. To minimise and control for spillover effects as a result of teacher transfers it will be critical that the project monitoring system tracks the status of trained teachers to allow for the evaluation analysis to control for cases where DP trained teachers transfer to control schools. Another potential cause of spillover effects the close proximity of both treatment and control schools, which might result in schools sharing resources. For instance, during DP-1 schools shared learning centre with nearby schools.

Therefore, during the data collection rounds, the evaluation team will need to gather information from both treatment and control schools to check for any spillover effects. At the community level, spillover or contamination are high and difficult to contain due to the mobility of population, i.e. CAP members sharing their practices with other community leaders in control areas. Unfortunately, minimising the effects of this is not possible, but we will try to gather data to control for such effects via the household survey in control areas. Lastly, another risk to contamination is the implementation of similar education programmes within the existing evaluation schools (this is discussed below).

Exposure to other similar programmes or government policies

As indicated in Annex 17, there are numerous programmes that are currently operating in each of the three counties with aims at improving education experiences of children, particularly girls. During the baseline, we gathered a list of some of the programmes and provided a list in Table 27 in Annex 17. The types of interventions range from teacher training, applying different educational technologies, to providing sanitary pads. These interventions are like to impact the same outcome indicators being tracked by the DP-2 project. Therefore, in order to mitigate this, we will need to identify and track what types of programmes outside of DP-2 that the control and treatment schools in our evaluation are receiving and control for this in our analysis.

Identification of Learning and Transition Cohort

The evaluation is tracking a joint sample for both learning and transition. The joint sample is made up of randomly selected girls in primary 5 from both treatment and control schools at baseline and is tracked through the remainder of the evaluation, i.e. in primary 6 at midline and JSS-1 (or primary 7 in Kenya) at endline. The reason for selecting a joint sample is because the DP-2 project specifically works with in-school children and therefore, the cohort sample was specifically drawn from schools.

In section 1.3 below, we discuss the selection process for respondents for each of the tools administered at the school and household level.

Sampling methodology by instrument

Table 15 presents the sampling methodology for each quantitative instrument at the school and household level at baseline. See Annex 10 for details on the qualitative sampling approach.

Table 25. Instruments by sample size, respondent type and selection method

Tools	Sample size and respondent type and selection method
Quantitative tools	
School survey	<ul style="list-style-type: none"> • One school survey was conducted per school either with head or deputy teacher of the school (for both treatment and control). • <i>In treatment school, for the module on DP training received the resource teacher was interviewed alongside the head teacher.</i>

Head count	<ul style="list-style-type: none"> • One randomly selected class in primary 5 and 6 in Ghana and Nigeria. <i>Two head counts per school</i> • One randomly selected class in primary 5, 6 and 7 in Kenya. <i>Three head counts per school</i>
Classroom observation + teacher assessment	<ul style="list-style-type: none"> • One classroom observation per school in either an English or Math class in primary 5 (at baseline). The class selected for the observation depends on the subject being taught at the time of the visit, i.e. if at the time of arrival the next subject to be taught in primary 5 is English then the observation will take place in that class. • Whether the class is taking place in regular classroom or the learning centre will be strictly driven by the timetable of the school at the time of the visit. • In treatment schools, only DP-2 trained teachers who received the numeracy and literacy training either directly from DLA or through the step-down training approach will be observed at midline and endline. Additional training such as the Intensive Teacher Training (ITT) and Gender-Responsive Pedagogy (GRP) will be key as well for the selection of the teacher.
Learning assessments (EGRA, EGMA and SEGMA)	<ul style="list-style-type: none"> • 20 girls (21 girls in Kenya) are randomly selected using the primary 5 school register (across all sections of primary 5). • Random number generator app was used to select girls that would make up the cohort for this evaluation.
Girls survey	<ul style="list-style-type: none"> • 20 cohort girls (21 cohort girls in Kenya): <i>same cohort girls selected for the learning assessment were selected for the girls survey</i>
Household survey	<ul style="list-style-type: none"> • 20 cohort girls (21 cohort girls in Kenya) households
Benchmark: Learning assessment (EGRA, EGMA, SEGMA and SEGMA)	<ul style="list-style-type: none"> • Kenya: in all treatment schools, 5 girls each were randomly selected in primary 6 and 7 using the school register. The EGRA/EGMA and SEGMA/SEGMA assessment was administered to each girl. • Ghana/Nigeria: in all treatment primary schools and corresponding JSS schools, 5 girls were randomly selected in primary 6 and JSS-1 using the school register. The EGRA/EGMA and SEGMA/SEGMA assessment was administered to each girl
Benchmark: Transition household survey	<ul style="list-style-type: none"> • 10 schools were selected by the DLA country teams from the treatment schools that represent the different types of communities that are included in the sample. • In the school catchment areas of the 10 schools, using snowball sampling approach, households that have children between the ages 11-15 years were identified and surveyed. A total of 10 households were surveyed in each school catchment area.

This annex serves to reflect on the adequacy of the learning and transition cohort samples, particularly the control group one, for the evaluation of outcomes at midline and endline.

- Explain the approach to select and identify the (learning and transition) cohorts of girls for the intervention and control group
- Identify any risk to comparability of the intervention and control group at midline and endline, e.g. different processes to select samples, exposure to different government policies, contamination or spillover effects.
- Show and comment on tables displaying intervention and control samples composition by region, age, grade and the subgroups identified in Section 3.
- Analyse any difference between the two groups and summarise any issue in comparing them according to the Difference-in-Differences approach.
- Provide any mitigation strategy for the issues identified.

Annex 12: External Evaluator declaration

Name of Project: Discovery Project – 2

Name of External Evaluator: Oxford Policy Management

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Reg Allen – Education Specialist (Learning Assessment Expert)

Denise Stuckenbruck – Child Protection Specialist

Patrick Ward, Quality Assurance – Evaluation Specialist

Stuart Cameron – Quality Assurance - Education Specialist

Research Guide Africa – Kenya Data Collection Firm

Kantar Public Ghana (TNS) – Ghana Data Collection Firm

OPM Nigeria Office – Nigeria Data Collection Firm

I, Sean O’Leary, certify that the independent evaluation has been conducted in line with the Terms of Reference and other requirements received.

Specifically:

- All of the quantitative data was collected independently ((Initials: SOL)
- All data analysis was conducted independently and provides a fair and consistent representation of progress (Initials: SOL)
- Data quality assurance and verification mechanisms agreed in the terms of reference with the project have been soundly followed (Initials: SOL)
- The recipient has not fundamentally altered or misrepresented the nature of the analysis originally provided by RGA, TNS and OPM Nigeria (Company) (Initials: SOL)
- All child protection protocols and guidance have been followed ((initials: SOL)
- Data has been anonymised, treated confidentially and stored safely, in line with the GEC data protection and ethics protocols (Initials: SOL)

Sean O’Leary

(Name)

Oxford Policy Management

(Company)

November 15, 2018

(Date)

Annex 13: Project Management Response

This annex should be completed by the project.

This annex gives the project the chance to prepare a short and concise management response to the evaluation report before the report is published.

Introduction:

The Discovery Project 2 (or DP2) baseline evaluation report, prepared by the project's external evaluator Oxford Policy Management (OPM), is a comprehensive and in-depth look at conditions on the ground in project areas across Kenya, Nigeria and Ghana. The results are voluminous and DLA management has taken the time to review and consider them carefully. At a high level, DLA agrees with many, though not all of the findings, conclusions, and recommendations of the report. The baseline report does a good job of detailing the overall environment in which the project works and prevailing conditions on the ground, as well as offering a useful critique of the project's design and theory of change. However, DLA does take issue with certain aspects of the report as detailed below. The DP2 team looks forward to hearing the thoughts and suggestions of DFID and GEC Fund Manager (FM) colleagues on both the baseline report and this response from DLA management.

What is the project's response to the key findings in the report?

This is an opportunity to describe where the project feels the evaluation findings have confirmed or challenged existing understanding and/or added nuance to what was already known. Have findings shed new light on relationships between outputs, intermediate outcomes, and outcomes and the significance of barriers for certain groups of children – and how these can be overcome? This should include critical analysis and reflection on the project theory of change and the assumptions that underpin it.

Overall

OPM's baseline report confirms many of the project's assumptions about the context and theory of change. Data collected by OPM includes teacher performance ratings that are low and test scores for literacy and numeracy that show girls far behind where they should be. Girls' low literacy and numeracy levels are in line with DLA's understanding (per the DP1 endline) and demonstrate the need to focus – as the project is – on key elements of teaching literacy and numeracy effectively and on students' mastery of foundational English literacy and mathematics skills. The baseline also confirms the value of community engagement and increased girls' self-esteem, life skills and self-efficacy as contributors to girls' attendance, learning and transition.

That said, the report also points out certain aspects of the project that are worth revisiting or following up in light of the baseline data collected. This includes major assumptions and potential causal gaps in the theory of change that should be further interrogated and monitored closely going forward. Of perhaps greatest significance, the report emphasizes how extreme poverty is the number one factor driving educational marginalisation, a fact that DP2's original design recognised and clearly stated would be a limiting factor. There is no question extreme poverty constrains project impact. Nevertheless, DLA management believes significant progress on DP2 outcomes can be made, even if expectations need to be measured as to how rapidly impact will occur.

Finally, an important clarification is needed in response to the baseline's reported number of project beneficiaries (see Table 2). OPM has since clarified that their presentation of direct versus indirect beneficiaries of the project was a mistake that they will correct in the final version of the report. DLA management confirms that all girls in project-supported schools (except for secondary schools in Kenya as previously agreed between DFID and DLA) should be counted as direct beneficiaries. Even as there are extra interventions targeting mid to upper primary girls, all girls in these schools are deriving significant, direct educational benefits from the project. Note also that the discrepancy between DLA's beneficiary count and OPM's estimate can be explained by the fact that theirs is based on what they found in evaluation sample schools. DLA's larger figure is grounded in official data for each and every project school and thus should be more accurate.

Specific Findings

Outcomes

Girls' Learning – The overall findings on girls' learning confirm DLA's understanding and support the focus of the DP2 design. Pupils across all three countries are not performing as would be expected by the curriculum, particularly in literacy in Ghana and Nigeria and numeracy in Nigeria. This is in line with the DP1 evaluation and other external data, as well as with internal observations and assessments that demonstrate that girls in Nigeria are worst off and girls in Kenya, on the whole, are performing better, albeit with significant regional differences. The project feels that the low baseline level of learning among the target group should be emphasized in any analysis both in this report and in both midline and endline observations going forward. Note that the specific sub-task results of the baseline are also informative in terms of guiding the focus of teaching and learning efforts in project-supported schools (even if generally confirming current assumptions). Factors impeding girls' learning include extreme poverty, remoteness / rural location, chore/labour burdens, pupil-teacher ratio, lack of female and qualified teachers, parents that do not speak English at home, lack of parent involvement in school, and lower self-efficacy. These are generally confirming of DLA's understanding of the multi-layered barriers to many marginalised girls' being in school, engaging academically, and actually learning. Most are outside of DP2's control, although the project is and will continue directly targeting teacher capacities, remedial learning for smaller groups of children, parent and community engagement, and increased self-esteem and efficacy for girls.

The EGRA and EGMA results in Nigeria are especially depressed. OPM reports that, until the language issue (lack of English in Kano) is resolved, they assume that the current baseline performance of Nigerian girls in literacy and numeracy is unlikely to progress despite investments in teacher training. This challenge – of upper primary teachers in Kano continuing to teach in Hausa even when the official language of instruction is English – is certainly well known to DLA. In spite of this, DLA believes most upper primary teachers in Kano have a level of English where they can, with support, be capable of developing phonemic awareness and teaching basic letter sounds, basic decoding of words and simple sentences. While the extent to which improvements by mid-line can be generated is uncertain, more significant improvements in foundational skills by endline are within reach.

Girls' Disabilities – In the evaluation sample, girls and parents were asked about their disability status. DLA is in agreement with OPM (in line with the Washington Group standards) that the inclusion of girls reporting "some difficulty" (as opposed to only "a lot of difficulty", and "cannot do at all") in the classification of girls as disabled is too broad and risks painting a false picture of challenges faced by sampled girls. This is especially noticeable regarding the "cognitive impairment" assessment which includes questions regarding difficulties remembering or concentrating. Even with the narrower definition

of disability recommended by OPM, of note is the relatively high percentage of girls in Ghana specifically reporting some cognitive disability. The project has no explanation for this high percentage, but it is certainly a finding that DLA takes seriously and will pay special attention to going forward. In this regard, it is worth noting that DLA's approach to teacher professional development is deliberately designed to train and coach teachers on strategies that benefit children with learning disabilities such as direct instruction, modelling, systematic teaching of synthetic phonics, and differentiation. Other material the project provides to address this disability include "Big Books", high frequency word lists, and video content with visual/practical examples and voice-over slowed to 85% speed. Effective strategies for teaching children with cognitive impairment will be a particular point of emphasis for DLA's teacher trainer-coaches in Ghana going forward.

Girls' Transition – The rate of transition reported in the baseline was much higher than anticipated for the project, at least for transition from P6 to JS1. It also differed dramatically, at least in Nigeria, from publicly available data, which per the baseline indicates less than half the girls in Kano move on to junior secondary after completing P6. DLA is surprised by OPM's findings and feels that these rates of transition will be difficult to maintain year-on-year even in ideal circumstances. Even taking them at face value, a target of maintaining 96% for Ghana and Kenya and 88% (from a baseline of 86%) for Nigeria may well be overly ambitious and prove very difficult to meet, especially for the end of primary to first year of junior secondary transition point in Nigeria (midline to endline). Moreover, the targets could become totally unrealistic in the event of external factors reducing transition rates in general in subsequent years, e.g. as a result of political upheaval or natural disasters. Extra scrutiny should be applied in subsequent evaluation points to ensure that such external factors are taken into consideration to the best degree possible. Overall, DLA management takes the position that while these targets comply with DFID's requirements (derived from OPM's benchmarking), further discussion with both OPM and the FM is warranted to ensure that the project is not held to an unreasonable standard.

Discrimination against Girls – When detailing the barriers to achieving DP2's targeted outcomes, the baseline report focused on extreme poverty and did not, in DLA's view, emphasize enough the depth and persistence of socio-cultural barriers to girls' education. Gender discrimination remains a major barrier that continues to impede progress for girls in project areas across all three countries. OPM questioned parents and community members on their attitudes towards girls' education and found this not to be a barrier for girls (especially as compared to poverty and geography). However, the project feels that this understates the deeply ingrained prejudices that manifest themselves in practice even when support, in theory, for equality of access in education (right up to tertiary level in Ghana and Kenya, if only secondary in northern Nigeria) is expressed by many. DLA points to the fact that in all three countries, but especially Nigeria, girls' attendance and transition even at lower grades, while improving, still lag behind that of their male counterparts. This indicates that while extreme poverty may be the primary barrier in many cases, girls are still more likely to encounter bias and discriminatory practices in school and to be taken out of school before boys. One example is where distance and safe passage to school are considered limiting. While not explicitly stated, this barrier has an obvious gender dimension in that boys are more likely to be allowed to travel further than girls. Another example is pressure to marry early. Gender discriminatory barriers should be detailed and addressed more specifically going forward. They are still a determinate factor in many girls' continued education and ability to succeed in school, even if not reported directly by parents and students.

Project Sustainability – There are many areas where DLA feels a better understanding of the project could have resulted in a more informed and accurate critique by the external evaluator. For example, a number of recommended "changes needed for sustainability" in the report already had been done or

already were being carried out prior to baseline. DLA accepts some responsibility for these shortcomings, in the sense that some sustainability-related monitoring data and documentation were shared with the OPM team late in the process. Still, the report reflects gaps in understanding at all levels.

At the community level, OPM assumed that the community action planning process was done apart from the schools when, in fact, the process brings together school and community representatives to plan and work together on key barriers to girls' education. Moreover, in response to the rather critical assessment of the evaluator, DLA feels that its up-front community entry meetings followed by the CAP process has proven highly effective. While the project does not dispute the findings of OPM per se, DLA feels that the overall level of community support and engagement, and specifically adoption and execution of the CAPs, is not fully understood. Internal monitoring from DP1 as well as current data on DP2 indicate that the uptake of the CAP process is widespread, and with the project taking on a more prescriptive and robust model in this phase (emphasising addressing barriers to attendance, learning and transition), DLA feels that this will only increase in effect over time.

At the school level, the baseline report faults DP2's strategy for over-reliance on key individuals, stating that the Resource Teacher trained by DLA might transfer. The assumption made is that there is only *one* Resource Teacher at each project-supported school. This is a factual error as an average of 6-7 Resource Teachers per school are extensively trained and equipped to step down (and model) DLA's training to their peers as well as to newly arriving teachers at the school as time passes. This approach mitigates against teacher transfers as, with a team of RTs in place, some residual leadership and capacity will remain for the long haul. Overall, DLA feels the school level is where the project is strongest in terms of sustainability.

At the system level, DLA's close partnerships and significant engagement of MOE partners in project areas since the start is not fully reflected in OPM's assessment of the situation. DLA feels that OPM was not able to gain as accurate a picture as the project would have liked concerning the DP2 relationship with local MOE offices, with which the project has generally strong, working relationships. In fact, DLA's main aim is to strengthen school ownership and capacity, along with community involvement and support, to continue project investments that are valued and, at the same time, to cultivate sub-national (county and sub-county in Kenya, regional and district in Ghana, and state and local government area in Nigeria) MOEs' commitment and capacities to integrate project-supported teacher professional development efforts within their own plans and allocation of available resources. DP-2 is seeing signs of this already and expects that the midline will take a closer look at progress in this direction as part of assessing the system level of the scorecard.

While DLA appreciates the sustainability scorecard and its general approach to assessing progress GEC-funded projects are making, DLA's view – somewhat different from OPM's – is that project sustainability can be highly successful even without integration of DLA's project into a national curriculum and education sector plan. This expectation is beyond the scope of DP-2 as national MOEs are beholden to numerous political and other external factors that make this unlikely for all but the largest, highest profile projects. Perhaps recognising this, OPM also recommends that DFID, given their access at this level, provide support to DP-2 (and indeed other GEC-T projects) in this regard. Although DLA's own relationships at national level (in Ghana and Kenya, at least) are strong and long-standing, the project certainly agrees with this recommendation and will continue to work with DFID country offices to ensure that national MOEs focus on this important work and appreciate how it furthers their education sector priorities. DFID's support in this regard at the sub-national level in Kano State, already provided to a degree, is also appreciated.

Stepping back, it is important to recognise that this ‘baseline’ takes place years into laying the groundwork for project sustainability, a process that began in DP1. In DLA’s view, there is a lot of data pointing to the foundations for sustainability being built at all levels, and, from this vantage point, OPM’s scoring does not reflect this very well. That said, when talking about sustainability of DP2 activities and results, this is a new phase focused on learning gains, first and foremost, so it’s appropriate to say these are early days and evidence of sustainability will manifest over the next 1-2 years as DP2 progresses. DLA management accepts that there is clearly ongoing work that DLA will need to continue, if not intensify, for the duration of project implementation to further cultivate and support project sustainability at all levels. The baseline findings – and scorecard framework itself – are helpful in pointing to areas that may need greater emphasis in DLA’s sustainability strategy. Over time, and especially with more evidence of DP2 impact on girls’ educational outcomes, DLA will concentrate more effort on systemic changes toward mainstreaming the project’s interventions within education plans and budgets, at least at the relevant sub-national levels.

Intermediate Outcomes

Girls’ Attendance – The concerns around data collection on attendance are well-documented in the baseline, and DLA is in agreement with these. Having said that, the attendance rates found by OPM were much higher than anticipated. While welcome if true, DLA is concerned that this does not accurately represent realities on the ground and could present an unrealistic picture of the classroom environment. While no action need be taken, additional scrutiny in this area may be warranted during the midline data collection. With respect to the DP2 theory of change, OPM points to community action (relative to teacher training or clubs) as the most promising avenue to bringing about an increase in girls’ school attendance. DLA agrees with this and project monitoring data already shows some evidence of community actions (such as home visits, PTA sensitisation, community outreach, etc.) leading to perceived increases in girls’ attendance.

Quality of Teaching – The baseline results, especially related to good literacy and numeracy teaching practice, confirmed teachers’ generally low capacities. Areas of documented weakness line up precisely with the focus of DP2 teacher professional development. DLA did note certain areas that were a focus of DP1 teacher training for which project school teachers rated higher than comparison school teachers. This was encouraging to see, and, coupled with the data presented on past training received, is evidence of some level of teacher continuity in project schools despite significant teacher transfers. The baseline report does bring out corporal punishment as an ongoing issue in project schools, referring to it as a well-established method for classroom management. DLA concurs that corporal punishment persists, especially in West Africa. The project continues to ask teachers to reflect on the effectiveness of this as a means of managing the classroom and bringing about the desired effect, which it clearly does not. This often comes up as a suggested barrier to education by teachers themselves and DP2 staff should be sensitive to the persistence of this practice in project-supported schools (and report incidents to relevant authorities at the school for follow-up).

Finally, regarding DLA’s library of content, the baseline brings out clearly how schools and teachers appreciate video as a tool for interactive teaching methods, engaging learners, expanding their horizons, and, most importantly, aiding pupil understanding of abstract concepts and recall. At the same time, OPM highlights how DLA’s content also can feel alien and removed from the curriculum. DLA appreciates both the positive and more critical feedback and has taken steps over recent years in response. As much as DLA’s earlier content was not designed in direct response to partner country syllabi, in some cases terminology or context differs in a way that does not facilitate learning and, if that is the case, the project

advises schools to not use that content. For newer content, DLA has been more focused on and better equipped to develop content that is directly targeted to identified county level needs. The new literacy and numeracy video series is a case in point and has been well received in DP2 countries. More generally, teachers and educational partners in each country continue to map DLA's content to many subjects and topics and DLA has seen innovative, creative, and highly effective use of a wide range of library content. Still, going forward, the DP2 team in each country will continue to monitor teachers' use of DLA-provided content and gather feedback to inform future production.

Attitudes of Others – DLA appreciates the baseline report's finding that parents and community members in all three countries have favourable views towards girls' education and positive aspirations for both girls and boys to further their education and attain a career. The effect of DP1 investments on this front undoubtedly has contributed. It was particularly encouraging to read that boys express the importance of girls' education. Less positively, the report's finding that, while parents' views and values around girl's education were positive across all countries, the high chore burden among girls at the household level seems to have a negative effect on children's ability to study and perform well in school. DLA management certainly agrees with this reality, which relates to the point above concerning various forms of gender discrimination, including this one, that continue to impede girls' education.

Girls' Life Skills – OPM's finding that girls' clubs in all the three countries offer the girls a space to use and develop their manual skills, raise their understanding and awareness of issues affecting their personal hygiene, which may be taboo topics in their homes, and provide them with a chance to increase their confidence and own reputation among others was appreciated. In addition, DLA was encouraged by OPM's additional finding that the types of clubs supported by the project that they sampled can potentially increase girls' self-efficacy. That said, it was surprising to read that some girls' clubs sampled at baseline have requested monetary payments from members, mainly to collect seed money for income-generating activities. This is not sanctioned by DLA and DLA's Club Start-Up Toolkit clearly guides against requiring dues and champions clubs that are open to all, especially the most vulnerable and marginalised girls in each school community. In sum, if such contributions are required of members, this is a clear barrier to entry that contradicts DLA's guidance. A quick internal check on this issue revealed that while some clubs may engage in this practice, it is not common, and seemingly not as widespread as the report suggests. Some of this may be the result of the qualitative findings sampling only a small number of (potentially non-representative) clubs in each country. Reports that club membership may be skewed towards better behaving or "neater" girls is also concerning, as this practice goes against DLA's instruction as well. The project is working proactively to ensure that any such de facto exclusionary practices are identified and minimised going forward (by refreshing school heads and club mentors on DLA's guidance in upcoming mentor trainings and ongoing monitoring of the clubs).

Theory of Change

The overall analysis of DP2's theory of change is appreciated and generally supportive. OPM finds there is evidence to suggest that the project's activities, if implemented well, should lead to desired results. That said, the evidence base is stronger for certain causal links than for others. DLA management is reassured to know that there is strong evidence that girls' clubs improve life skills, self-esteem and learning outcomes, and also that there is support in the literature for DP's assumption that teacher training and educational media lead to improved teaching and learning outcomes, as well reduced dropouts. It is also reassuring to know there is at least some evidence that community involvement generally can change attitudes and behaviours related to girls' education.

DLA is concerned by the lack of effect of teacher training on attendance, per the literature. From data collected from teachers and students across a number of countries over many years, DLA does have reason to believe that the addition of TV and educational videos in schools can increase attendance. In fact, the DP1 evaluation pointed to increased attendance, especially in more rural project areas where educational technology is not common.

OPM's research is also somewhat more mixed on the potential impact of community engagement. DLA is disappointed that OPM's literature search somehow failed to find community interventions similar to the community mobilisation and action catalysed by DP. In fact, this is surprising, given that such approaches are and have been for a long time quite common among community development organisations, often with strong, positive results.

On a more sceptical note, OPM underlines the fact that the project does not address the main driver of educational marginalisation in project areas, poverty, and thus that there is reason to question whether DP-2's interventions will have the expected impact. It should be noted that the original DP2 proposal did include an economic component for this exact reason, but it was dropped due to budget limitations. There is no question that the baseline findings do raise significant doubt regarding the degree to which project impact can be realised within the project timeline, especially for the most marginalised girls. DLA will build a more explicit statement of key assumptions underlying DP2's theory of change into its revised logframe and is committed to tracking these assumptions over time.

What is the project's response to the conclusions and recommendations in the report?

The management response should respond to each of the External Evaluator's recommendations that are relevant to the grantee organisation (see Section 6). The response should make clear what changes and adaptations to implementation will be proposed as a result of the recommendations and which ones are not considered appropriate, providing a clear explanation why.

As stated above, the project is in general agreement with the majority of conclusions reached by OPM. DLA accepts that the main drivers of girls' educational marginalisation in all three countries are poverty and remote and rural locations where children live, albeit with the caveat that gender inequality, in DLA's view, continues to hinder far too many girls' attendance, learning and transition. DLA also agrees that there is little the project can do to directly affect poverty and geography-related sources of marginalisation and therefore must focus on other important barriers that, if addressed successfully, can unlock improvements in educational outcomes despite the impoverished and remote circumstances of many DP2 beneficiaries. The project also acknowledges the conclusion, already a central assumption in DP2's design, that many girls in target schools are far behind where the curriculum would expect, and that lack of foundational reading and math skills is behind this. DLA concurs with the conclusion that higher levels of self-efficacy are associated with higher learning scores, which aligns well with the DP2 theory of change. Below, DLA responds to each of the recommendations as outlined in section 6.2 of the report:

Recommendations against observed barriers to education

DP-2 should revisit their ToC with specific attention to better articulating the strength of evidence behind each step in the causal pathways, and particularly the implicit assumptions that underpin these causal pathways. DLA agrees with this recommendation (see response to the ToC findings, above, in the immediately preceding section).

DP-2 should demonstrate a more nuanced understanding of the different profiles of marginalised girls. DLA appreciates this recommendation and the baseline findings clarify various aspects of marginalisation in DP2 project areas. The project will seek to better identify subgroups within the student population. DLA is already doing some of this work, with local partners and stakeholders, by involving mid-to-upper primary girls (and boys) who are not yet literate and numerate in remedial sessions led by teachers and volunteers outside of normal classroom hours to ensure they are not left behind. Further, the DP2 community and leadership action planning processes specifically walk participants through a data-driven analysis of most at-risk children and how best to support them to more regularly attend and succeed in school. Furthermore, the project is already refining its monitoring to better identify community actions (stemming from CAPs) and club activities that specifically reach out to or benefit the most marginalised girls (and boys).

The importance of updating the ToC and providing more nuance in the definition of marginalisation is demonstrated with extreme poverty being an important external factor affecting attendance, transition, and learning. Whilst some CAPs seek to address these, DP-2, in their training of CAP members, could pay specific attention to support communities to overcome the barrier of extreme poverty...DP-2 could consider collaborating with other actors in human development sectors and government agencies to provide better coordinated support to extremely marginalised girls (their communities and households). DLA management appreciates the importance of extreme poverty as a profound barrier to marginalised girls' education. That said, it is challenging to adjust the DP2 design at this stage, at least in any significant way, to attempt to tackle this. The project is already working with Camfed in Ghana, a collaboration that includes bursary support for the most marginalised girls in five (of nine) project districts there, but other such partnerships that could have targeted families living in extreme poverty in DP2-supported school communities were declined. Specifically, an innovative proposed partnership with CARE International to bring their village savings and loan model to DLA project areas in all three countries was not accepted due to budget limitations and it is hard to imagine how DLA could bring new poverty-fighting partners on board at this point in project implementation. However, DLA is certainly open to working with other organisations where opportunities exist. It should be noted that the community action planning process does entail asset mapping, which serves as a vehicle for school and community representatives to identify local partners, projects or initiatives that might be tapped into to advance their CAP objectives in behalf of the most marginalised girls and boys in DP2 communities. That said, most project-supported communities are very poor and neglected, and thus the asset mapping process is inherently limited in terms of the extent to which it can mobilise resources to support girls' education. The one way in which the project is addressing this challenge, very modestly and with limited effect, is through support to club micro-enterprises (social enterprises, really). When profitable, these should lead to tangible support for the neediest children, and especially girls, in DP2-supported schools (the toolkit and training provided by DP2 call for clubs to set aside a portion of profits for this purpose).

Moreover, better knowledge sharing with other actors in the sector to learn what works, how, in which context and for whom, will be useful especially with regard to teacher training. DLA management certainly agrees with this. In addition to collaboration on the ground, DLA values knowledge sharing with other actors as well, believing that such collective learning can help the project identify issues and potential solutions common to the work of educating marginalised girls. DLA will continue to reach out to others both individually and in partnership with local DFID and GEC FM offices.

Recommendations against outcomes

DP-2 should clearly define what they mean by self-efficacy, aligned to the work they are undertaking via the 'My Better World Curriculum'. DLA accepts the overall definition of self-efficacy put forth by OPM in the baseline report. The MBW curriculum and accompanying video series produced by DLA is reflected well in the framework for measuring self-efficacy provided by OPM and, more broadly, in the girls' survey questions related to life skills. Grounded in DP1 endline results, DLA believes that self-efficacy will be developed not only by MBW within the girls' clubs, but also through more gender-responsive schools and classrooms and more supportive peers, parents and communities brought about by various DP2 school and community (not just club) interventions.

The GEC-T definition of transition does not distinguish between progression in primary grades, and transition to junior secondary schools. DLA agrees with OPM's concern here.

Literacy learning outcomes in Nigeria are of serious concern. This is in large part outside of DP-2's control, given that teachers in Nigeria often demonstrate a poor command of the English language themselves. DP-2 and GEC-T should re-consider whether current expectations around improvements in literacy against English are realistic given this context, and whether literacy training in Nigeria should instead focus on much more fundamental elements of understanding. DLA management certainly agrees that learning levels in Nigeria are a grave concern. However, the project does not agree entirely with the statement that this is largely outside of DP2's control as DLA believes most upper primary teachers in Kano can, with support, develop phonemic awareness and teach basic letter sounds, basic decoding of words, and simple sentences, and DP2's accelerated learning strategy focuses in on basic mathematics and English literacy. All that said, the project wholeheartedly agrees that expectations around improvements need to be realistic.

We recommend that DP-2 consider specific engagement with the MOE to support the regularisation of key DP-2 activities in education sector plans and budgeting. As expressed above, in relation to the findings, DLA feels that the sustainability of teacher training is not reliant on just a few key individuals as expressed in the recommendation. The premise for this disagreement is the fact that DP2 builds a cadre of Resource Teachers (RTs) at each school (not one as understood by OPM) and that a range of MOE officials participate in DLA's teacher training workshops before and alongside teachers receiving them. The officials whom DP-2 invites are drawn from various available ranks and departments; thus, by and large the ministries are well represented. Between workshops, MOE and DP2 staff conduct joint project monitoring visits (and MOE counterparts do many of their own as well), including teacher observation and coaching, and DP2 teams meet with local education offices periodically for joint assessment of progress and joint planning, with a large focus on ongoing teacher professional development efforts. In any case, the project will continue to work on further strengthening MOE relations in project areas and to make the case for integrating DP2 activities with demonstrated results in their priorities, plans and budgets going forward. After DLA teacher training, RTs introduce fellow teachers to workshop content and provide peer training and support. This is an action point from the workshop for the RTs to undertake once they return to their schools. So far, these step-down trainings are taking place, as recognised in the baseline itself.

Increased support to attendance monitoring. DLA generally agrees with the need to improve record keeping of attendance and can and does include headcounts during classroom observations. The project cautions that even periodic head counts are likely to only give an incomplete picture of attendance in project schools. DLA does feel that as the overall capacity of teachers improves, better record-keeping, including attendance will be put forth.

The literature review indicated that community-based monitoring has potential to improve attendance as well as school quality. DP-2 could consider supporting community-based monitoring of DP-2 schools, through existing CAP structures. DLA management is not averse to this, and in fact DP2 does pave the way for school and community representatives together to analyse school-level data, as part of defining the focus of community action and (soon with the Leadership for Change workshops) leadership action plans, and then to monitor such data over the course of plan implementation. DLA's preference is to keep this process mutual, i.e. in terms of bringing school and community leaders together around this. It is important to acknowledge that the School Scorecard approach OPM is recommending has significant cost implications as well, and thus would be hard to graft on to DP2 at this stage even if desired.

We find that CAP members are generally influential members of the community. DP-2 could consider encouraging a more diverse membership of the CAP community. It is extremely important that key decision makers and influencers are included in this process – for action plans to have high-level backing and greater prospects for success – and yet it is also important to include the voices and perspectives of the most marginalised. DLA is committed to gender and social inclusion and this was a point of emphasis during the recent GESI self-assessment. DLA will re-emphasize to field teams the organisation's commitment to including women and their perspectives in our work and remind that they should always be proactive in seeking women's participation. In addition, within the upcoming Leadership trainings and remaining Community Workshops, DLA will ask them to deliberately seek disability and any other especially marginalised group representation whether through community participation or representation from bodies such as MOE special needs units. The project will discuss OPM's 'parent lottery' concept with field teams for further feedback, though keep in mind that random selection of a parent likely would result in that parent having to forfeit daily income earnings to attend the workshop.

Given evidence that teachers perform poorly in assessing student performance, DP-2 should support teachers to better improve their understanding of the importance of and their ability to: (i) gather information about what all pupils understand and are able to do; (ii) consider what that information might mean; (iii) alter classroom practice accordingly. This is absolutely right and very much part of DP2's focus already. As part of teacher training, DLA has taken teachers through diverse formative assessment strategies in general and for numeracy and literacy specifically. DLA's training also has emphasized the importance of day to day student assessment. DLA has also encouraged teachers to vary teaching practices to get desired results. However, whereas formative assessment is not a new concept in all three education sectors, teachers, based on their reaction to the same in workshops, do not seem to have an adequate understanding. Thus, DLA is emphasising it in workshops. It should also be noted that these skills are complex and require repeated training, support, and reinforcement over time and are not likely to show results immediately.

We recommend working as intensively with schools as possible and working with teachers to better understand barriers to implementing new approaches and how they may be overcome. DLA generally agrees with this suggestion and is on track to implement it. As the project unfolds, DLA trainer-coaches are continually working with teachers to observe, coach and support by examining closely what is working and why, what is not working and why. DLA's leadership training also asks that leaders, including teacher representatives, think about the barriers to transformative change and create plans to address those barriers in collaboration with fellow teachers and other stakeholders. This training includes a school effectiveness self-assessment that requires workshop participants to explore and assess the level to which they have knowledge of and systems/tools in place to understand and support teacher

development needs, pupil learning and attendance needs, teacher motivation needs, and so on. This school effectiveness self-assessment is intended to inform the leadership action plans.

What changes to the logframe will be proposed to DFID and the Fund Manager?

The management response should outline any changes that the project is proposing to do following any emergent findings from the baseline evaluation. This exercise is not limited to outcomes and intermediate outcomes but extends also to outputs (following completion of Annex 3 on the output indicators).

The recommended changes in the log frame are likely to strengthen project monitoring and measurement of progress towards desired outcomes. The recommendations generally highlight ways to strengthen and achieve set targets in a robust way and will enhance data capture, make reporting easier and improve on efficiency. The project does agree with most of the recommendations, but each is addressed below specifically from outcomes through outputs.

Outcome Level

Learning, Transition and Sustainability:

These are generally prescribed by the FM, so DLA management will not comment extensively. That said, as OPM does point out, there are questions related to the learning and transition targets that should be discussed in the DLA-FM baseline review meeting. For sustainability, DLA also would appreciate the opportunity to discuss expectations for the project vis-à-vis the scorecard at midline and endline.

Intermediate Outcome Level

Attendance:

- DLA agrees with recommendation to pay specific attention to highlighting the importance of attendance keeping practice, and specifically monitor schools in terms of their performance on record keeping. To do this, DP-2 will modify some of its monitoring tools to quantify attendance head-counts during classroom observations in addition to recording head-teacher impressions of attendance.
- DLA also agrees with the attendance targets (maintaining >90% for Kenya and Ghana) and 1% annual increases in Nigeria (from a baseline of 80%).

Quality of teaching:

- The project is in agreement that this should be measured in a more targeted way, per the proposed indicators, below. The project also agrees that, for purposes of target

setting, the focus should be on demonstrating improvements at each round of the evaluation.

- *Increased proportion of teachers who meet to a high standard all classroom management techniques.* The project agrees and will include in a revision of the logframe.
- *Increased proportion of teachers who meet to a high standard at least two numeracy/literacy teaching approaches.*⁶ The project agrees and will include in a revision of the logframe.
- *Increased proportion of teachers who meet to a high standard at least one assessment strategy.*⁷ The project agrees and will include in a revision of the logframe.

Attitudes and perceptions:

- The recommendations for measuring attitudes and perceptions are mostly agreed upon by the project. As the second indicator is more of an output-level indicator, however, a more appropriate one may be “CAPs with recorded evidence of progress in learning or transition”. This is to be discussed by DLA management. However, it should be noted that only the first two indicators are quantitative and therefore more easily recorded by the project. The final three proposed indicators are acceptable, but with the caveat that DLA’s engagement with parents and boy students, is limited, and therefore may not be collected as frequently as other aspects of the intermediate outcome.

Life skills and self-esteem:

- The project appreciates the recommendation of the external evaluator for this intermediate outcome. However, two of the recommended indicators: Evidence of the establishment of girls’ clubs and increasing proportions of girls enrolled in clubs are not appropriate. The former is not a good outcome measure and should be, more appropriately, at the output level. The measure of increasing the proportion of girls enrolled in clubs is also not really an intermediate outcome that DP2 is seeking. Instead, DLA will discuss an intermediate outcome related to “recorded evidence of concrete actions taken by clubs that have strengthened members’ life skills and self-esteem” akin to the similar indicator for community attitudes, above.
- Regarding the final target, club members’ perceptions of the value of clubs in promoting life skills, the project does agree with this indicator in principle, but cautions that the qualitative nature of the indicator means that data collection for it will be far less frequent

⁶ We do not recommend meeting all numeracy/literacy teaching approaches as it is not necessary that a teacher should apply all approaches in a single lesson

⁷ We do not recommend meeting all assessment approaches as it is not necessary that a teacher should apply all approaches in a single lesson.

going forward. Note that the girls' survey developed with the external evaluator has a life skills section that seeks to measure at least some of the areas covered in the My Better World curriculum and that can be drawn upon in developing questions to be explored in club focus group discussions at midline and endline.

Output Level

Teachers gain requisite skills:

- Output 1.2: *Percentage of schools using media resources at least 5/week during and after school hours*. While this indicator still holds, the project has identified data collection issues with school logs. The project is accordingly reconsidering how this information is collected and recorded by staff. DLA proposes refining its "school health check form" to simplify this procedure while still collecting the full usage log.

Community support towards the project:

- Outputs 2.1 and 2.2: *Number of community action plans that specifically address learning/transition*. The project feels that the number of CAPs that address learning and transition is not particularly useful, given that DP2's Community Workshops that facilitate the development of CAPs essentially steer school and community representatives to these objectives (they are listed in the action plan template DLA provides), and thus *all* CAPs should be addressing these issues. A more meaningful measure is CAP activities completed and this will be retained.
- Output 2.4: *Number of girls reporting reading and math tutoring / academic support*. DLA feels that this indicator should reflect the remediation efforts launched as part of DLA's accelerated learning strategy. The project is employing learner checks to monitor remedial learners' progress and this indicator should be altered to reflect this. A better indicator may be "Number of girls receiving quality remedial instruction in English literacy and numeracy". Quality then can be assessed via project monitoring (including observation and coaching) of remedial teaching and results of simple before and after testing of a sample of girls (learner checks).

Girls and Boys gain life skills:

- Output 3.1: *Percentage of girls taking part in club activities*. While all girls would potentially benefit from club participation, the project feels that not all girls can or should be expected to take part in club activities. Alternative measures such as the number of well-functioning (appropriate mentor in place, clear objectives) clubs, how active they are and what kind of activities they engage in are more useful and appropriate to track. It is recommended that this indicator is removed and replaced with more specific, meaningful measures such as these.

- Output 3.3: *Percentage of boys participating in targeted life skills curriculum as part of boys' clubs.* It remains to be seen how many boys' clubs will be formed and, as above, participation alone is an insufficient measure of effectiveness. Therefore, the project recommends simplifying this measure to measure number of clubs, how often clubs are meeting and what activities they are engaged in.

Stakeholders take the lead on implementation of the project:

- Output 4.2: *Number of school MOUs signed with MOE backing and support.* This is fine as is, though note that it already has been achieved in the first year of project roll-out.
- Output 4.3: *Percentage of schools that have developed plans to continue active use of educational media and continue teacher training.* The team is considering whether this needs to be refined to be more precise and whether there is need to clarify associated monitoring, e.g. activities taken by schools in enacting these plans can be recorded.

Annex 14: Cohort Tracking Protocol

Cohort tracking involves tracking the same girl respondents throughout the course of the evaluation. This section describes our cohort tracking protocol. This protocol will be adapted during the course of the evaluation, as additional guidance from GEC becomes available and based on learnings from the initial rounds of data collection

Preparation for cohort tracking at baseline

At baseline, we will collect the following information from each cohort girl during the school visit:

- Full name, parent/guardian's full name, age and current grade of the cohort girl. The name, age and grade will be verified by the girl herself, the head teacher, and the girl's class teacher. The information will also be cross-checked against school records.
- Community, address and telephone number of the household where the cohort girl lives.

The girl's household will then be visited, using the information provided by the cohort girl during the school visit. During the household visit, the following information will be recorded from each household:

- Name of primary caregiver and head of household
- Phone numbers of caregiver and head of household and other people that might know about the cohort girl's whereabouts within a three-year period
- Community name, address, GPS locations of the cohort girl's household and any nearby landmarks
- Name of village or community leader

During the baseline data collection, each cohort girl is assigned a unique ID, and all information collected to track this girl and her household will be safely stored together with the unique ID.

Cohort tracking at midline

Because there is no household survey at midline, cohort tracking at midline will only be conducted at the school level. Cohort tracking at the school level will also be conducted during the additional attendance monitoring rounds. The cohort tracking during attendance monitoring will follow the same steps as outlined below, but limited to the 50% of sample schools that are selected for attendance monitoring.

Cohort tracking at school level

Cohort tracking at the school level will follow the following steps:

1. **Step 1 – Provide fully updated information on all cohort girls to supervisors:** Fieldwork supervisors will be equipped with fully updated information on the cohort girl, captured at baseline or during subsequent rounds of data collection.

2. **Step 2 – Verify whether the cohort girl is still enrolled at the same school:** Supervisors will verify with the head teacher whether each cohort girl is still enrolled at the same school. This will be confirmed with the school records, and by the deputy head teacher / class teacher, wherever the head teacher has any doubt.
 - a. **If the cohort girl is still enrolled at the same school:** Supervisors will ask the head teacher / class teacher to pull the girl from the class.
 - b. **If the cohort girl is no longer enrolled at the same school:** Supervisors will ask the head teacher,
 - i. Whether the cohort girl transferred to another school, and if yes, to which school.
 - ii. Whether the cohort girl has dropped out of school, and if yes, ask for the reason for having dropped out of school.
 - iii. Whether the head teacher has contact information (address, telephone number) of the cohort girl. The supervisor will compare the contact information provided by the head teacher to that collected at baseline / the previous point of data collection.
3. **Step 3 – For girls enrolled at the same school, verify household contact information:** For girls that are still enrolled at the same school, a fieldwork team member will verify household contact information with the cohort girl. The fieldworker will:
 - a. Verify the name and contact number of the primary caregiver, and record any new information if either of these have changed.
 - b. Verify whether the cohort girl has changed dwellings since the last point of data collection, and if yes, collect information on the new location of the girl's household.
 - c. In preparation for the cohort tracking at endline, during the midline data collection in Ghana and Nigeria, the cohort girl will be asked whether she intends to transfer to a Junior Secondary School, and if yes, to which school she intends to transfer.
4. **Step 4 – Track girls that have transferred to another school that is part of the evaluation sample:** If the head teacher reports that a cohort girl has transferred to another school that is part of the evaluation sample, the fieldwork teams will attempt to track the cohort girl in her new school. If the girl can be successfully tracked, the girl's household information will be verified as in Step 3, and the learning assessment will be administered. Tracking of cohort girls to other schools within the evaluation sample will only be conducted at midline and endline, and not during the additional attendance monitoring rounds. During the attendance monitoring rounds, information will be collected on the name of the school that the girl has transferred to, but her presence in the other school will not be verified.

Girls that transfer to another school in the evaluation sample will be asked when they transferred to the other school.

- a. Based on the timing of the transfer, it will be decided whether the school- and teacher-level characteristics of the girl's old or new school should be used during any regression analyses.
- b. It is possible that a girl, who was enrolled in a treatment school, transfers to a control school or vice versa. Based on the timing of the transfer, it will be decided whether the treatment status assigned to that cohort girl should be that of her old school or that of the new school that she has transferred to.
- c. In general, the assignment to a school and a treatment status would be in line with the school where the girl has spent the most time since the baseline evaluation. For example, a girl who originally attended a treatment school, but transferred to a control school would continue to be assigned to a 'treatment' status if she had spent more time in the treatment school, but would be assigned to a 'control' status, if she had transferred to the control school shortly after baseline, and had spent more time in the control school.
- d. The final guidelines to be followed with regards to assignment of school and treatment status will be determined closer to the midline evaluation after reviewing the status and consistency of programme implementation across schools.

Cohort tracking at endline

In Nigeria and Ghana, pupils usually transition to Junior Secondary School (JSS) in their seventh year of education. This means that between midline and endline, many girls are likely to transition to a new school, which poses additional challenges for tracking the cohort of sampled girls. In Ghana and Nigeria, we are proposing to start by conducting cohort tracking at the household level during the endline evaluation, before tracking at the school level. This is done to ensure that we identify the maximum number of respondents from our learning cohort during the household visit. For Kenya, it will be assessed closer to the time whether to conduct the household survey first (to align with the approach for Ghana and Nigeria) or to maintain the baseline approach and conduct the school-based survey first.

Cohort tracking at household level

Cohort tracking at the household level will be conducted at endline only. Cohort tracking at the household level will follow the following steps:

1. **Step 1 – Provide fully updated information on all cohort girls to supervisors:** Fieldwork supervisors will be equipped with fully updated information on the cohort girl, captured at baseline or during subsequent rounds of data collection.
2. **Step 2 – Phone tracking using available phone numbers:** Fieldworkers will make courtesy phone calls to all households to verify the household's location and to make an appointment for the household visit.

- a. Fieldworkers will call the caregiver using the contact number provided during the previous round of data collection.
 - b. Calls will be made at acceptable hours during the day. If not successful, alternative phone numbers provided during data collection will be attempted.
 - c. If the initial call is not successful, fieldworkers will attempt to call the household up to five different times over the course of three days.
 - d. If the fieldworker is able to reach the correct household and respondent, the fieldworker confirms the location of the household. If the household has moved to a new location since baseline, the fieldworker notes down the detailed address, including any nearby landmarks. The fieldworker also confirms contact numbers, and identifies a convenient time to visit the household. This information is recorded on the *Household Tracking Form*.
 - e. Households will not be physically tracked if during the phone tracking, or during the previous school visit (in cases where phone tracking is not successful), the respondent has indicated that the household has relocated to a location that is outside the scope of the survey. The radius within which households will be tracked will be decided closer to the time and will be specific to each country and locality.
3. **Step 3 – Physical tracking of the household:** Fieldworkers then attempt to find the household.
- a. **Physical tracking after successful phone tracking:** Fieldworkers visit the household at the time agreed during the phone tracking using the information provided during the phone tracking. GPS coordinates can be used in cases where the household has not moved to a different location since baseline.
 - b. **Physical tracking after unsuccessful phone tracking:**
 - i. If the head teacher and/or the cohort girl have indicated that the household still lives in the same location as at baseline (or if no updated information could be provided by the head teacher / cohort girl), the fieldworker attempts to track the household to the baseline location, using the information collected at baseline, including address, landmarks and GPS coordinates.
 - ii. If the head teacher and/or the cohort girl have indicated that the household has moved to a new location since baseline, the fieldworker attempts to track the household to the new location using the information provided by the respondent.
 - iii. Where fieldworkers are unsuccessful at finding the household's location, they consult the community leader for additional information.
 - c. In the event that a household has been tracked, but no respondent is found at home, the fieldworker will attempt to visit the household a total of three times, making sure to visit at

different points in the day or week. If no respondent can be found during any of the three visits, the household is considered to be lost from the transition cohort.

- d. In the event that a household cannot be physically tracked, after following all of the steps outlined above, the cohort is considered lost from the transition cohort.
4. **Step 4 – Identify the cohort girl’s school enrolment status:** For households where physical tracking was successful, the interviewer will identify whether the respondent is still enrolled in school, and if yes, in which school she is enrolled.
5. **Step 5 – Determine a sample of schools to be visited (in Ghana and Nigeria):** In Ghana and Nigeria, the information collected from the cohort girls on which school they are currently attending (whether a Junior Secondary School, or a primary school in the case of girls that may be repeating a grade) will be used to select a list of schools that will be visited during the endline survey. The number of schools to be visited at endline will be equal to or less than the number of primary schools visited at baseline. The aim will be to identify the set of schools that will maximise the number of cohort girls that can be tracked.

Cohort tracking at school level

Cohort tracking at school level at endline will follow the following steps:

1. **Step 1 - Provide fully updated information on all cohort girls to supervisors:** Fieldwork supervisors will be equipped with fully updated information on the cohort girl, including the school that she is expected to be attending.
2. **Step 2 - Verify whether the cohort girl is enrolled at the expected school:** For each girl that had indicated that she is attending the school, the supervisor will ask the head teacher to verify whether the girl is enrolled at the school. If the girl is identified, she will be asked to complete the learning assessment and school-level tools.
3. **Step 3 – Confirm that no other sampled girl is enrolled at the school:** A sampled endline school will be linked to that baseline school, from which the largest number of sampled cohort girls have transitioned. For girls from the linked primary school that were not successfully tracked at the household level, the supervisor will confirm with the head teacher that the cohort girl is not enrolled at the sampled endline school.

Cohort girls will not be tracked to schools that fall outside the list of sampled primary and secondary schools.

Annex 15: Baseline Quality Assurance Approach

We are committed to ensuring that this impact evaluation is carried out to the highest standard possible. An important component of this is ensuring that we collect good primary data.

Survey principles

The following four principles underlie and cut across all stages of the evaluation from survey design to implementation. These are:

- **Stakeholder dialogue:** This is an essential component of any effective study to ensure that the design, implementation and analysis reflect the needs of the client. The purpose of the survey should be clearly articulated and any trade-offs in the design explicitly discussed. DLA, FM and other key stakeholders must also be engaged effectively when the findings are shared so that their interpretation and implications are clear.
- **Quality control:** Throughout all stages of the survey project the role of the survey management team is to ensure constant quality control. Mistakes made in any one part of the study can considerably diminish the quality and therefore the usefulness of the study findings. OPM has well-established quality control procedures across the entire survey process. We normally collect data using tablets (CAPI) to allow real-time quality control of fieldwork.
- **Risk management:** Whilst careful planning and management can mitigate the impact of risks on the successful delivery of a project, insecurity, natural disasters and other unexpected events can significantly disrupt project implementation and have an impact on the study. It is for this reason that OPM prefers to work closely with the client and its stakeholders throughout the duration of the project.
- **Adhering to ethical principles:** OPM is committed to ensuring complete adherence to research ethics while carrying out primary data collection. The principles of voluntary participation, confidentiality, do no harm, and respect are always upheld.

Approach to implementing surveys

When conducting surveys for this evaluation, we adhered to the following general approach that includes but is not limited to the following activities:

1. Stakeholder consultation and design

During the inception phase we engaged in an initial dialogue with DLA, the FM, and other relevant stakeholders to clarify and revise the objectives of the assignment and the overall design, approach and workflow.

Bringing together expertise in survey and instrument development, data and fieldwork management, and knowledge of the local context during the design phase, we were able to produce high quality instruments that were tailored to the purpose of the study as well as the local settings. We worked with our Nigeria

country office, RGA in Kenya and TNS in Ghana to complement our survey expertise by providing knowledge of the local context, in-country survey experience, and established field teams and management procedures. The design drew on in-house and external expertise in sampling, instrument development and data collection processes.

The development process included developing the overall study design, key indicators and analysis plan. The adaptation of the survey instruments draws on international best practice and norms and build on the insights of previous related surveys. At the end of the design phase, we along with our local partner firms conducted a **pre-testing of all survey instruments, piloting of the learning assessment tools and field protocols**. This process addressed translation, feasibility of fieldwork protocols and the full data cycle including any sampling, interviewing and data consistency checking. We consequently updated instruments and fieldwork protocols with any changes that were identified during the pilot.

2. Preparing for fieldwork

Prior to the full roll-out of fieldwork, the following stages were implemented:

- **Obtaining ethical clearance and approvals:** before any training or data collection was carried out, ethical clearance on the research, data collection tools and protocols were sought from OPM's Ethical Review Committee. In addition, research permits and approvals were sought from the relevant government authorities at the national level and/or at the district/county/local government administration level.
- **Developing manuals and guidelines:** fieldwork manuals were developed for enumerators and guidelines were developed for other key staff: fieldwork supervisors, fieldwork monitoring teams and data managers.
- **Recruiting fieldworkers:** our Nigeria country office, RGA and TNS have a pool of skilled and experienced fieldworkers from which fieldworkers for this survey were recruited. Preference was given to enumerators and supervisors who had been engaged in similar studies in the past, including particularly those that have worked with children. Candidates were evaluated on their education level, previous relevant fieldwork experience, interpersonal skills, fluency in local languages and computer literacy. Gender representation was always taken into account and for this survey, we recruited predominantly women to engage with girl respondents. Other factors such as location and knowledge of the area were also considered in order to allow the selection of the most suitable enumerators who could illicit trust and participation from the survey respondents. We aimed to keep the total number of enumerators as small as possible, consistent with delivering the project within the agreed timeframe in order to maximise data quality. See Table 26 for the field staff qualifications and responsibilities for the quantitative and qualitative team.

Table 26. Staff qualification and responsibilities

Position	Qualification	Responsibility
Enumerators	<ul style="list-style-type: none"> • Must have 1-2 years of experience conducting school and household surveys; • Must be familiar with the area of the study and fluent in their local languages(s); and • Must possess at least a national diploma or relevant tertiary education qualification. 	<ul style="list-style-type: none"> • Administering learning assessments and girls survey to cohort girls, following up with respective households to conduct surveys with primary caregivers' • Tracking households that were part of the panel survey according to the household location and contact information provided;
Supervisors	<ul style="list-style-type: none"> • Must have about 2-3 years of survey experience and managing similar types of assignments; • Must possess at least a tertiary education or master's degree; and • Must have be familiar with the area of the study and fluent in their local languages(s). 	<ul style="list-style-type: none"> • Perform daily assignment of field tasks to enumerators; • Responsible for ensuring the enumerators are performing tasks as per the protocols and procedures outlined in the training documents; and • Observe at least 2-3 interview per day for each enumerator to assure quality of data and adherence to study protocols
Classroom observers and learning assessment markers	<ul style="list-style-type: none"> • Should have at least a university/teaching degree or master's degree; • Should have 4-5 years of teaching experience; 	<ul style="list-style-type: none"> • Conducting classroom observations and teacher assessments • Reviewing and marking learning assessments – specific sections of the EGRA/EGMA and SEGRA/SEGMA
Quality Assurance	<ul style="list-style-type: none"> • Should have completed the tertiary level education and computer literate; • Should have 2-3 years of surveys using the CAPI technique; • Should have carried out supervisory monitoring support on similar surveys in their previous jobs; and • Should have a good combination of organizational and leadership skills. 	<ul style="list-style-type: none"> • Conduct quality assurance oversight of entire school and household level fieldwork, this includes conducting spot checks, back-checks and shadowing exercises in the field; and • Review completed surveys for errors, inconsistencies, clarity issues, etc. • Lead on the daily team debrief at the end of each day's work • Provide technical support to the team supervisors as required during field work
Qualitative Researchers	<ul style="list-style-type: none"> • Must have prior experience conducting qualitative research, experience in participatory research was beneficial. • Experience in education research was beneficial • Must be fluent in the regional languages and dialects • Must be comfortable communicating and writing in English 	<ul style="list-style-type: none"> • Conducting research using qualitative research guides with cohort girls and boys, head teacher, mentor and teachers and parents • Administering and checking diaries of all cohort girls • Taking notes during research activities • Participating in daily debriefs • Participating in the end-of-research debrief

Position	Qualification	Responsibility
	<ul style="list-style-type: none"> Should have completed their police verification before joining the training 	<ul style="list-style-type: none"> Conducting MOE interviews, where feasible with one of the country team leads
Qualitative team leader and co- team lead	<p>An OPM qualitative expert was the in-country team leader. The teams were co-led by country team leads.</p> <ul style="list-style-type: none"> Qualitative experts who demonstrable experience leading qualitative research Prior knowledge of managing qualitative trainings, debriefs and fieldwork 	<ul style="list-style-type: none"> Lead qualitative research team in-country. Lead all trainings, fieldwork and debriefs Check all notes, diaries and transcripts to ensure quality Support and monitor team when conducting research Conducting MOE interviews with team members where feasible
Translators and Transcribers	<ul style="list-style-type: none"> Experience in translating and transcribing notes Familiarity with local language and dialects Proficient in English and typing 	<ul style="list-style-type: none"> Translate and transcribe all notes from audio to text

- Developing fieldwork implementation plan:** in each country, our local partners developed a data collection schedule prior to the fieldwork roll-out. This sets out the implementation plan across the duration of the fieldwork and specifies which teams are visiting which PSUs and how many interviews are to be conducted per day per enumerator. The development of this timeline is important to monitor the fieldwork progress and indicate whether the fieldwork will be completed on time or more resources should be allocated and other contingency plans adopted to ensure the timely completion of fieldwork.
- Ensuring security and duty of care:** OPM strives at all times to minimise the risks arising from its work in the field and takes on the responsibility for the security and duty of care to ensure the safety and wellbeing of all our staff and consultants, including making appropriate security arrangements. For external partners or sub-contractors, we conducted a due diligence assessment to ensure that the organisations we are working with have the capacity to carry out their own duty of care. In the absence of this, OPM will cover their duty of care when undertaking the assignment.
- Other logistical activities:** We have ensured teams have reliable transportation to be able to move from one area to the other, and to be prepared for emergency transportation in the event that a fieldworker is injured or becomes seriously ill and needs immediate medical attention. Our partners are also equipped with all materials they need in the field to ensure that the work can continue at full capacity at all times, such as sufficient supply of questionnaires (if paper-based), stationary, well-functioning tablets, tablet chargers, spare batteries, phones and sim cards, solar power chargers, etc.

- **Training:** sufficient training is vital to successful data collection. We have invested in long training periods (at baseline, the training in each country lasted a total of 8 days – including 5 days training and 3 days piloting of instruments) as that has proven to significantly improve the quality of data collected. The training is delivered and closely monitored by a team of survey experts as well as experts in the project's area of research who contribute in their area of technical expertise. The main objective of the training is to ensure that enumerators master the instruments, understand and correctly implement the fieldwork protocols, and comfortably use CAPI. Supervisors are further trained on their extra responsibilities of fieldwork oversight, monitoring enumerators, data management and fieldwork and financial management logistical tasks.
- The training had two components: a classroom-based training component and a field-based component. Role plays and extensive practical exercises in the field are employed throughout the duration of the training. Enumerators administer mock interviews either in pairs, groups or in front of the entire class in the relevant local languages. In addition to improving their general interviewing skills, this permits the identification of those specific terms and concepts that are likely to pose challenges in communication, especially to the less educated respondents.
- The training also serves as a screening process for skilled enumerators and supervisors. A higher number of enumerators than needed for fieldwork attended the training to allow for a selection of best-suited candidates at the end of the training and to provide a pool of additional trained staff in case of fieldworker attrition during data collection. Throughout the duration of the training, trainees were evaluated on an ongoing basis through written tests and observation during role plays in the training or during field practising. This is useful not only to evaluate trainees but also to identify areas of general misunderstanding or individuals struggling with particular concepts or questions, so that the training can then be tailored to focus or retrain on these areas or individuals.
- **Full team pilot:** the training culminates in a full multi-day pilot that is conducted by the whole team of fieldwork supervisors and enumerators. All the instruments and protocols are implemented in such a way that a day in the pilot will simulate a day in data collection as far as possible. Each enumerator conducted a certain number of pilot interviews and most were accompanied by mentors during the interviews. All questionnaires were checked by survey management and feedback was discussed in plenary debrief sessions in order to discuss corrections and improvements.
- **Community-level advocacy:** prior to visiting a community, we visit community leaders or chiefs to inform them of the upcoming survey activity and purpose to facilitate cooperation and as a matter of courtesy. Furthermore, there helped us to to secure the necessary permissions to facilitate the fieldwork.

3. Quality control during fieldwork

OPM firmly believes that **error prevention** is a key part of a quality assurance strategy. Recruitment of experienced enumerators, thorough training including real field condition practice, as well as close supervision and ongoing feedback to the field teams helps to prevent errors in the first place.

To assure that the data quality of survey work to be conducted meets the highest standards, OPM will put in place six levels of Quality Assurance Mechanisms:

- The core OPM staff involved in the delivery of quantitative fieldwork will quality assure the fieldwork operations by regularly visiting and observing teams during fieldwork. **During the first week of fieldwork, all the field teams will be accompanied and supervised by a senior staff member**, who will be given responsibility to observe the team in the field, check all questionnaires on a daily basis and give feedback to the enumerators. On-the-spot extra training and feedback will be provided as necessary.
- **Data validation procedures will be coded into the CAPI instruments directly and will first be run by the enumerator on site at the end of the interview.** At the end of the interview, the enumerator will validate the file and they will receive an error message whenever there is a mistake or missing information. During the interview, enumerators will receive warning messages for improbable or impossible answers, and combinations of answers that are contradictory or can be ruled out by logic, and flag potential outliers. Enumerators use primary checks during the interview to ensure that the responses collected are consistent. The enumerator will be able to verify the response during the interview and fix the mistake and/or address the warning message.
- **Data validation checks will be rerun by team supervisors at the end of each field day** and any discrepancies identified will be discussed in daily debriefing sessions with the field team. This real-time feedback will allow enumerators to re-visit any problematic interview and resolve inconsistencies.
- **Data will be sent on a daily basis to the data management team who play a key role in the quality assurance system.** After having received new interview files and fieldwork reports, the central data management team will run a large number of automated secondary checks in a statistical package (such as Stata or SPSS) before accepting individual interviews. Where inconsistencies are found, the data management team either follows up with enumerators or respondents over the phone or sends enumerators back to the respondents. Due to the short time lag, enumerators are typically still in the area, allowing the use of timely revisits to clear inconsistencies. The data management furthermore monitors fieldwork progress and enumerator performance, and provides feedback to individual enumerators or the entire field team when necessary.
- **Strict protocols on replacement of interviewees.** In some cases, it may be necessary to replace an interviewee. For example in the case of a household survey if a household refuses to be interviewed, is not present during the enumeration period, or if the household cannot be located. Typically in the case of non-presence, the enumerator will be expected to make three separate attempts to contact the household before making a replacement. Any replacement must be approved by the field operation manager.
- In addition to the core data collection activities, OPM will provide **a team of independent fieldwork monitors** who will carry out **spot checks** by visiting a random selection of enumeration areas to re-administer a randomly selected sub-set of questions to a small portion of

the sample for consistency checks. They will also be responsible for **interview observation** which involves observing enumeration teams to monitor how questions are being asked, how responses are recorded, and how the respondent is being treated. Finally, the fieldwork monitors will undertake **protocol observation** to ensure that respondents are selected appropriately and the replacement procedure is carried out according to guidelines.

4. Data collection and management using CAPI

The survey was administered using Computer Assisted Personal Interviewing (CAPI) with tablets. CAPI survey design brings considerable advantages over traditional data collection methods using pen and paper, including higher quality of data, improved fieldwork management and assessment, and faster availability of data. The surveys for this evaluation were programmed using Survey Solutions and CSPro. All programmed instruments were desk tested before field testing.

5. Data processing

We conducted live data checking and cleaning concurrently with the data collection. Once data collection was completed we performed additional data processing activities in order to transform the collected cleaned data into a format that is ready for analysis. This involved:

- **Reshaping and integrating datasets** (the CAPI programme used might result in several datasets for different levels of analysis and tables),
- **Anonymising data** by removing all variables that identify respondents such as names, address, GPS coordinates, etc.,
- **Classifying non-response and coding** them using a pre-determined classification scheme,
- **Properly naming and labelling** the variables in each dataset,
- **Calculating sampling weights** to make the survey data representative of the population of interest.

Approach to ensuring quality in qualitative research

For a robust evaluation methodology, OPM applies a range of strategies of rigour when conducting qualitative methods. Rigour is conceptualised as trustworthiness of qualitative research (Lincoln and Guba, 1985) which consists of four principles: **credibility** (authentic representation of experience), **confirmability** (extent to which biases, motivations, interests or perspectives of the inquirer influence interpretations), **dependability** (minimisation of idiosyncrasies in interpretation; variability tracked to identifiable sources) and **transferability** (fit within contexts outside the study situation). We followed a protocol of ensuring rigour throughout the evaluation by implementing specific strategies. The main aim of the strategies is to minimise a single researcher bias and to be transparent in demonstrating the research process as well as data analysis, which implies that the qualitative research should contain an emergent dimension not fully prescribed from the outset.

1. Piloting of qualitative instruments

Prior to the implementation of the qualitative research the various tools to be implemented were thoroughly piloted. As such, a pre-testing exercise was conducted both of the tools themselves but also of any protocols, including introductions to communities and respondents and conduct in interviews or discussions. This was necessary to ensure that the qualitative research is appropriate for the local context of each of the countries.

2. Selection of national researchers

National qualitative researchers were selected on the basis of having relevant qualitative research experience. Our local partners had a pool of experienced qualitative researchers familiar with the local environs and culture, and fluent in local languages that we drew from.

3. Training of national researchers

A four day training session was held for the qualitative research. The training included a presentation of the key programme objectives and planned interventions. It also covered a discussion of evaluation or research questions, and a refinement of the qualitative tools including any participatory tools.

The lead qualitative researcher for each country headed a discussion of possible interviewer biases and ran through how best to ensure that these would not affect the quality of data. The training included workshoping sessions to provide translation of the qualitative research guides into appropriate local languages.

At the conclusion of the training session a one-day pilot was conducted, after which the qualitative research instruments were finalised.

4. Daily debriefs and team checks in the field

As a key part of qualitative fieldwork, the teams conducted some initial synthesis and analysis in the field. The aim was to conduct thorough debriefs and initial analysis in the field to both avoid any errors of interpretation of the qualitative data as well as to discuss interesting emerging issues for further exploration.

The qualitative field teams were given a debrief format that provided a description of the school or community and the local environment, as well as a summary of the day's fieldwork. In daily debriefs, each team presented their findings of the day to allow for initial triangulation of evidence, which was discussed and recorded by the group. Research gaps that needed to be addressed in the following day's fieldwork were identified and any possible biases were discussed on a daily basis.

5. Data treatment and collection

All qualitative researchers were asked to write fieldwork journals that were used to feed into the daily debriefs. Debrief reports were completed for each community visited to provide brief descriptions of the community/school and the surrounding environment.

All qualitative interviews were recorded, where permission or consent was given. Recordings, visual outputs and consent forms were safely stored and linked to transcripts for further analysis. All recordings were transcribed into English by transcription experts in each of the local firms.

6. Coding for analysis

After the data was collected and transcribed we developed and applied a rigorous coding system by evaluation/research indicator, theory of change mechanism and contextual information. This was necessary to systematically identify the core issues and themes emerging from key informant interviews or focus group discussions.

The best coding practice ensures that coding labels themselves are constantly reviewed so that if information in certain codes begins to overlap, then those codes can be merged as ideally, codes should be mutually exclusive.

Coding aims to classify all of the data so that it can be compared systematically with other parts of the data. At least two different researchers independently coded the first few transcripts. This is important as alternative viewpoints will ensure that one particular perspective does not dominate. It is vital that the coding should look out for the unexpected and not just code in a literal. As well as getting a holistic impression of what was said, coding line-by-line will alert the researcher to consider that which may ordinarily remain invisible because it is not clearly expressed or does not fit with the rest of the account. In this way the developing analysis is challenged; to reconcile and explain anomalies in the data that will make the analysis stronger.

7. Developing a working analytical framework

After coding the first few transcripts, all researchers involved met to compare the labels they have applied and agree on a set of codes to apply to all subsequent transcripts. Codes can be grouped together into categories (using a tree diagram if helpful), which are then clearly defined. This forms a working analytical framework. Several iterations of the analytical framework was required before no additional codes emerged.

8. Applying the analytical framework

The working analytical framework was then applied by indexing subsequent transcripts using the existing categories and codes. Each code is usually assigned a number or abbreviation for easy identification (and so the full names of the codes do not have to be written out each time) and written directly onto the transcripts. Computer Assisted Software is particularly useful at this stage because it can speed up the process and ensures that, at later stages, data is easily retrievable. It is worth noting that unlike software for statistical analyses, which actually carries out the calculations with the correct instruction, putting the data into a qualitative analysis software package does not analyse the data; it is simply an effective way of storing and organising the data so that they are accessible for the analysis process.

Annex 16: DP-2 Child Protection Framework



Annex 16 DP-2 Child Protection Framework.zip

Annex 17: Other Similar Programmes Operating in Nigeria, Kenya and Ghana

Table 27 list some of the education programmes currently operating in Nigeria, Kenya and Ghana. All the programmes listed below aim at improving the education experience of children, particularly girls. Although the means of achieving it ranges from video campaigns to teacher training and providing sanitary pads to girls, the combination of the varying activities are highly likely to contribute to improved school attendance and learning in one way or another.

Table 27: List of other education programmes operating in Nigeria, Kenya and Ghana

Programme	Objective	Activity	Status
Nigeria			
Jolly Phonics	To enable children to become fluent readers	Learning provides Jolly Phonics products (books, software, audio, DVDs, flashcards, teacher handbooks with lesson plans, activities and games for reading and spelling) that use the synthetic phonics method of teaching letter sounds in a way that is multi-sensory and fun	Ongoing
Education School Support Programme	To improve the delivery of education services	Education technology, infrastructure, M&E, teacher and head teacher support and materials development	Completed
Dabazarmu	To raise awareness around girls education through storytelling on radio and videos	Schools were provided with radios, SD cards with different stories showcasing the challenges that girls face in pursuit of education	Ongoing
Global Partnership for Education	To improve the education system	Financial support to school, e.g. sponsorship of N50,000 for female teachers to acquire the minimum qualification for teaching	Ongoing
Teacher Development Program	To provide teacher training on the use of low-cost materials and supply of lesson plan to schools		Ongoing
Kenya			
Tusome Early Grade Reading Activity	to improve early grade education across Kenya by 2019	Support teachers' capacity to effectively deliver classroom instruction, improving schools' access to appropriate books and other learning materials, enhancing instructional support and supervision and collaboration with other stakeholders	Ongoing
Girl Power Clubs Africa initiative	To empower women to gain self-esteem and make decisions for themselves	training teenage girls to become agents of positive change through sport, culture, art and dance, currently targeting in 42 schools in Kenya	

	through sports be leaders by		
U-Tena	To mentor and empower girls through afterschool activities	After-school support to provide information on HIV transmission and encourage young people to get tested and treated, to use a condom, discuss family planning, sexual and reproductive health	
The Plan projects with needy children and girls	To help 'needy students'	Sponsoring needy student; Providing girls with sanitary towels – this complements the government initiative to provide sanitary towels to adolescent girls in Kenyan public schools.	Ongoing; complete
School feeding programme	To provide children with food at school	Food supplies are provided by NGOs such as the World Food Programme, and money for firewood is provided by parents to sustain the school feeding programme in schools	
World Vision	To provide children with medical assistance; To enrol and re-enrol out of school children in Wajir and	Identifying children with eye infections and taking them to a hospital; Sensitising communities, running community enrolment drives and building community child protection and education structures.	Ongoing
Save the Children	To increase enrolment of girls in Wajir		
Individual donors and CSR initiatives such as MICATO	To help students in greatest need of support to prevent their dropouts	Sponsoring school fees or extra-curricular fees, or books, pens etc.	
Ghana			
Learning Project/ Early Grade Learning Project (USAID)	The project seeks to enable children how to read in their mother tongue as their first language. It is for KG and P1 class and focuses on the use of sounds in teaching basic literacy skills	Provide the school with TLMs, providing training to teachers in workshops to enhance teaching techniques	Ongoing
Campaign for Female Education (CAMFED)	Promoting girl child education by providing some basic needs of the girl child in school.	By providing them with uniforms, exercise books, footwear etc. Also collaborated with Bursary Programme	Completed

Oxfam IBIS	The target of this initiative are students from seven years to ten years who are out of school. The programme focuses on how get them back to school.	Training focusing on leadership and team building working with teachers	Ongoing
School for Life	The purpose (of the training) was to integrate the School for Life concept into the mainstream school.		Completed
Right to Play	Incorporating games into learning, to ensure children are learning through playing and games.	Teacher training, use of games to teach	Ongoing
Football for Wash	Encouraging and allowing students to play football and other games to keep children in school, and to exercise to keep fit. Also teaches life skills	Use of games, teacher training, provision of materials, teaching life skills	Ongoing
National Literacy Acceleration Programme (NALAP)	Focusing on literacy for KG to Class 3 i.e. on how the children can start with the mother tongue.	Teacher training to help improve literacy skills	Completed
JEPEK	Assisting the schools in terms of finances towards improving infrastructure and well-being of the school	Financial support	Completed
Capitation Project (Government)	The Capitation project provided money to school to cater for inadequate/ broken furniture.	Financial support and funds to fix structural problems in the school	Ongoing
Forney Education (USA)	Training on pronunciation of vowels and consonants to improve English skills	Teacher training to improve literacy	Completed

Annex 18: Key characteristics of baseline samples – supplementary information

Table 28: Comparison of disability rates reported by parents and by girls

	Nigeria		Kenya		Ghana	
	Caregiver report (%)	Girl report (%)	Caregiver report (%)	Girl report (%)	Caregiver report (%)	Girl report (%)
Definition 1: 'some difficulty', 'a lot of difficulty' or 'cannot do at all'						
Girls with disability (overall)	6.7***	14.4	22.2***	33.9	16.8***	40.7
Vision impairment	1.7***	3.5	10.5***	14.5	4.2***	7.9
Hearing impairment	1.9**	3.0	3.5***	5.8	4.1***	6.4
Mobility impairment	1.8*	2.7	2.6	3.2	2.2***	5.6
Cognitive impairment	1.3***	6.0	6.8***	13.5	6.6***	29.9
Self-care impairment	0.4***	1.7	1.7	2.2	0.5***	2.1
Communication impairment	0.3***	1.3	2.0***	7.0	2.1***	5.5
Definition 2: 'a lot of difficulty' or 'cannot do at all'						
Girls with disability (overall)	1.1***	2.6	3.2***	5.6	2.1***	9.0
Vision impairment	0.3	0.7	1.2**	2.2	0.5	0.7
Hearing impairment	0.1	0.3	0.6	0.8	0.1**	0.6
Mobility impairment	0.7	0.8	0.1	0.3	0.4	0.4
Cognitive impairment	0.0***	0.6	1.0*	1.7	0.9***	7.2
Self-care impairment	0.1***	0.6	0.3	0.4	0.1	0.3
Communication impairment	0.0*	0.1	0.2**	0.8	0.4	0.4
Sample size (N)	2,154	2,187	2,062	2,319	1,857	1,863

Source: DP2 girl and household survey 2018

Notes: Respondents identified as having a disability include those with difficulty in at least one domain recorded as 'some difficulty', 'a lot of difficulty' or 'cannot do at all' for Definition 1, and difficulty in at least one domain recorded as 'a lot of difficulty' or 'cannot do at all' for Definition 2. Stars indicate that means between parent report and girl report differ significantly from one another at the following levels: *** p<.01, ** p<.05, * p<.01.

Table 29: Girls' characteristics by sampling strata in Kenya (%)

	Formal schools		Non-formal schools		Semi-arid / arid regions	
	Intervention (%)	Control (%)	Intervention (%)	Control (%)	Intervention (%)	Control (%)
Single orphan	9.8	10.4	10.7	9.9	14.8	12.9
Double orphan	1.2	1.3	1.4	0.3	0.5	0.8
Living without both parents	8.3	10.4	7.8	7.6	13.8	13.5
Living in female headed household	34.3	33.1	29.1	32.3	36.2**	28.6
Married	0.6	0.0	0.0	0.3	0.0	0.0
Mother (under 18)	0.6	0.5	0.0	0.3	0.2	0.5

Mother (under 16)	0.6	0.5	0.0	0.3	0.3	0.5
Difficult to afford for girl to go to school	63.0	59.3	71.4**	79.4	60.1	56.3
Household does not own land for themselves	44.9	47.3	45.7	46.5	26.4	21.5
Extreme poverty rate (based on poverty line of \$1.90 / day)	8.8***	14.1	11.7	12.3	50.8**	56.1
Poverty rate (based on poverty line of \$3.10/day)	25.4***	31.9	31.8	32.7	74.8**	79.1
Language of instruction is different from mother tongue	86.5	87.1	91.6	90.7	96.3	95.6
Girl does not speak language of instruction	0.9	0.6	0.6	0.4	20.7*	15.4
Head of household has no education	3.0	5.8	4.7*	2.1	67.4	71.3
Primary caregiver has no education	3.3**	7.5	5.5**	2.3	71.4	71.4
Living with one parent only	31.4	31.0	26.2	29.8	25.4	23.9
Rural location						
Sample size (N)	338	352	347	350	406	269

Source: DP2 household survey 2018. All indicators are reported by caregivers.

Notes: (1) Language of instruction refers to the language in which caregivers report that their child is learning in at school. This can be different from the language policy of the country. (2) The poverty rate is calculated by averaging the poverty likelihood that the PPI scorecard assigns to each household. (3) Rural or urban location was based on the school's location that the cohort girl attends as reported in EMIS data. This information was available for Nigeria only. (4) Stars indicate where means between intervention and control groups differ significantly from one another at the following levels: *** $p < .01$, ** $p < .05$, * $p < .01$.

Table 30: Potential barriers to learning and transition by sampling strata in Kenya (%)

	Formal schools		Non-formal schools		Semi-arid/arid regions	
	Intervention	Control	Intervention	Control	Intervention	Control
Home / community level						
Safety and distance to school						
Fairly or very unsafe travel to schools in the area (caregiver report) [^]	20.5	16.6	23.4	18.9	8.1*	12.5
Doesn't feel safe travelling to/from school (girl report)	9.9*	6.6	11.0*	7.5	7.6**	12.8
Closest primary school is further than 30 min walk away [^]	7.1	9.1	3.8	3.1	17.5	18.9
Closest secondary school is further than 30 min walk away [^]	20.7	20.0	11.2	8.6	52.6***	77.2
Parental/caregiver support						

High chore burden (spends a quarter of the day / a few hours or more on chores) [^]	15.6	12.7	15.5*	21.3	14.8*	20.2
Helps with agricultural work, family business or work outside the home [^]	13.3*	18.9	9.5	8.0	26.1*	33.6
School level						
Safety at school						
Doesn't feel safe at school	2.0	1.9	3.3	1.9	5.2*	8.9
School facilities						
Pupil teacher ratio (PTR) over 40	54.6*	61.6	0.0	0.0	57.7***	5.2
Proportion of unqualified teachers	0.6***	4.9	22.6***	16.5	16.5***	25.8
Pupil to qualified teacher ratio over 40	59.5	61.6	37.0*	31.3	69.1***	43.8
School has no female teachers	0.0	0.0	0.0	0.0	13.5	16.3
School does not have access to water	0.0	0.0	0.0	0.0	9.5***	3.6
School does not have separate toilets for girls	0.0	0.0	5.3***	0.0	0.0***	12.3
School does not have access to electricity	0.0	0.0	0.0***	3.5	5.9***	0.0
School had at least one day without electricity in last 5 days (of schools with electricity)	19.8	24.2	46.3***	71.9	41.9***	31.5
Sample size for indicators from household survey (marked with [^]) (N)	338	352	347	350	406	269
Sample size for indicators from girl or school survey (N)	405	407	400	410	421	276

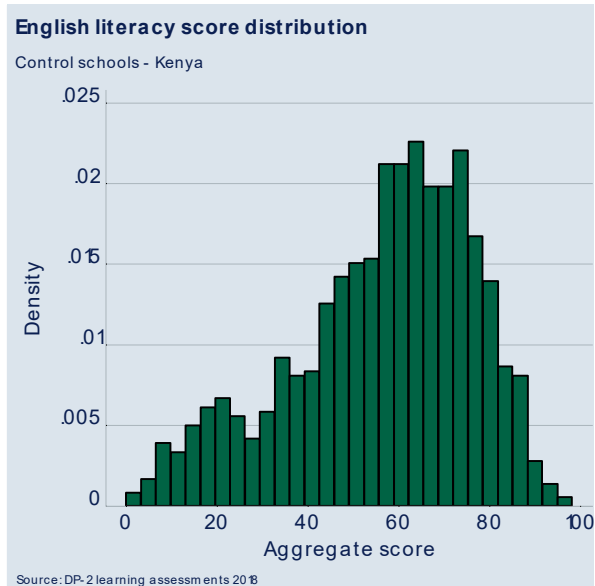
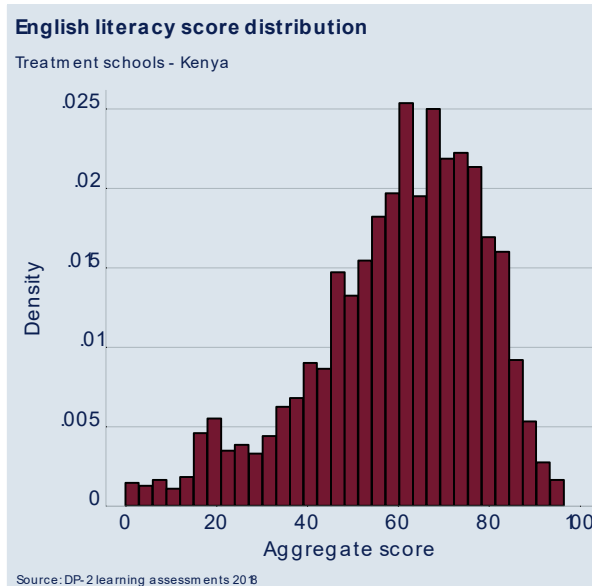
Source: DP2 girl, household and school 2018

Notes: (1) Access to electricity refers to access from any source, including the national grid, generators, solar panel or any other source. (2) Stars indicate that means between intervention and control groups differ significantly from one another at the following levels: *** p<.01, ** p<.05, * p<.01.

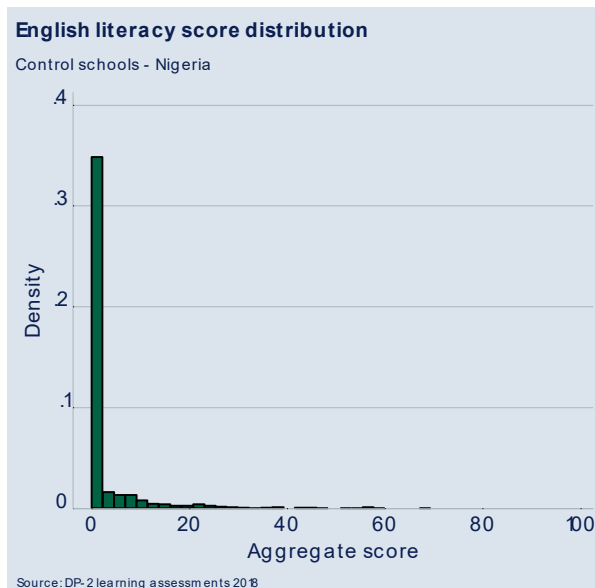
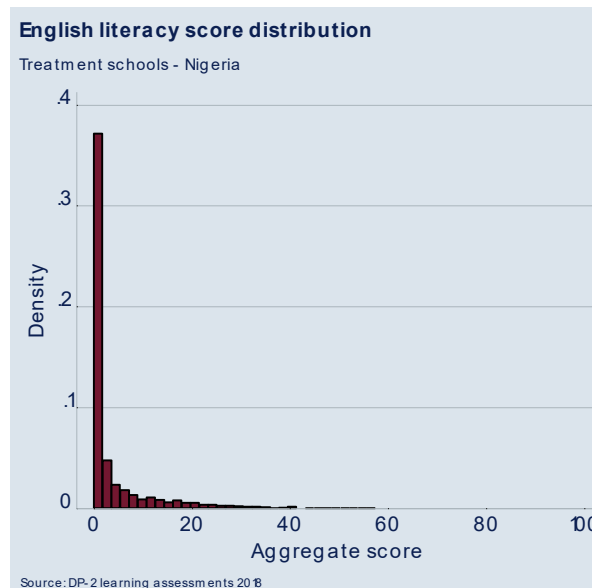
Annex 19: Supplementary data on pupil learning

Aggregate score distributions of the learning outcomes

English literacy scores in Kenya have a similar distribution in treatment and control schools. There are no floor or ceiling effects.

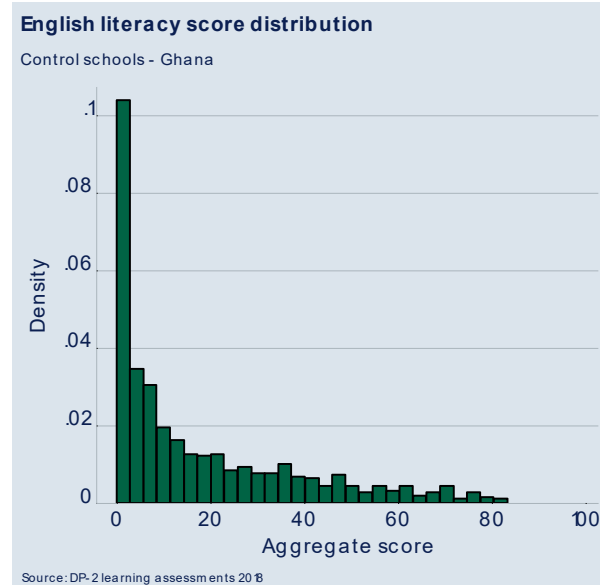
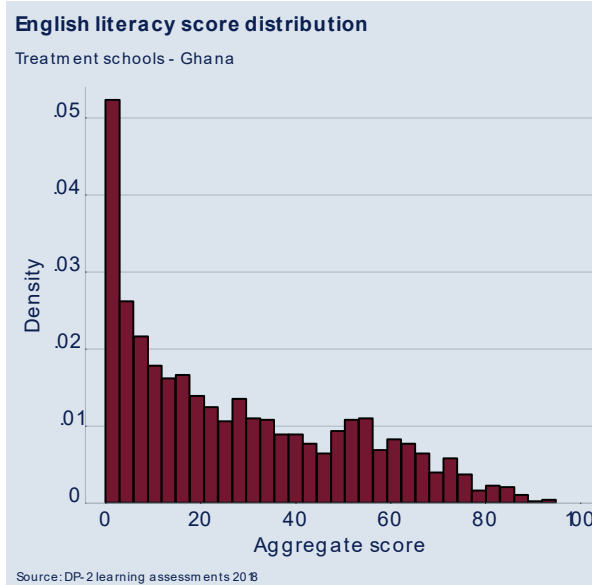


English literacy scores in Nigeria have a similar distribution in treatment and control schools. There is a floor effect for English literacy scores for the learning cohort. Since the piloting showed that the majority of pupils in Nigeria are not able to read English at all (e.g. the majority of pupils can sound at most one letter), simplification of other subtasks would not have yielded any additional information. In future

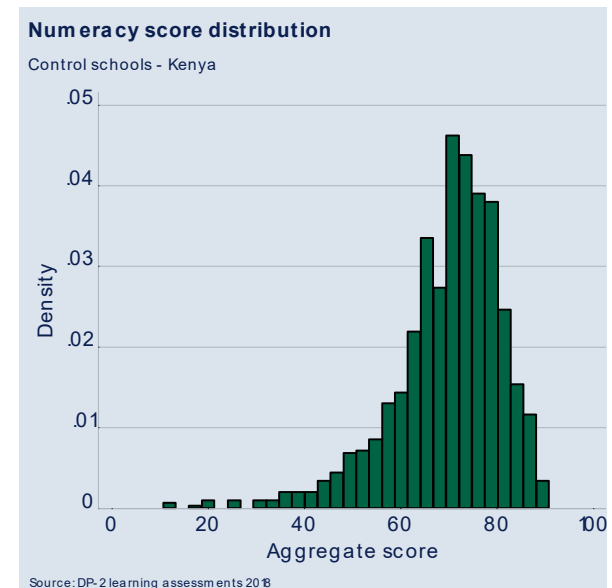
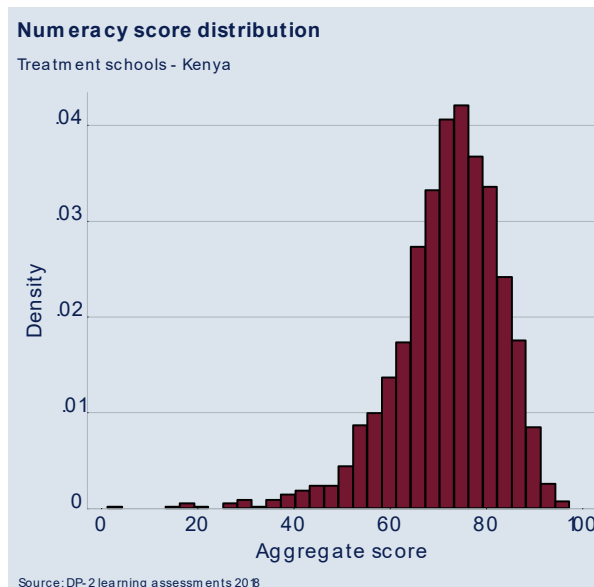


evaluation rounds, the easiest EGRA subtasks will help to identify whether there have been any significant changes since baseline.

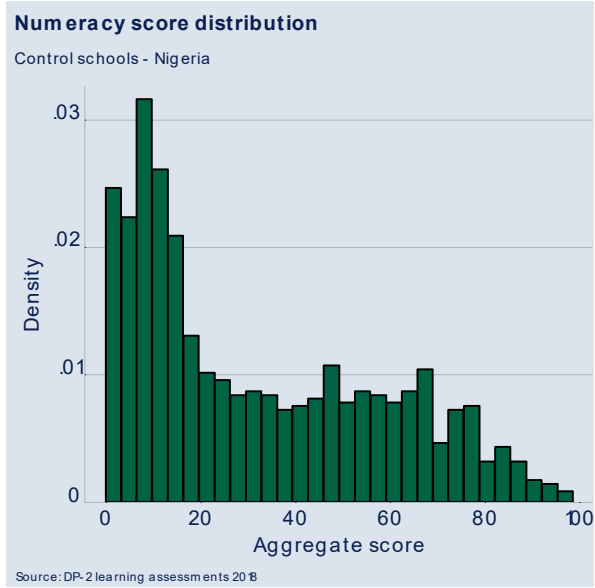
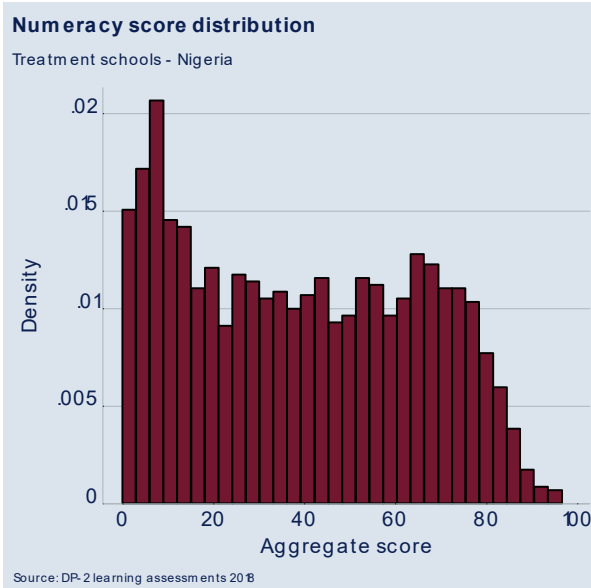
English literacy scores in Ghana have a similar distribution in treatment and control schools. The distribution of scores suggest that there is a floor effect, although this is not as pronounced as for Nigeria.



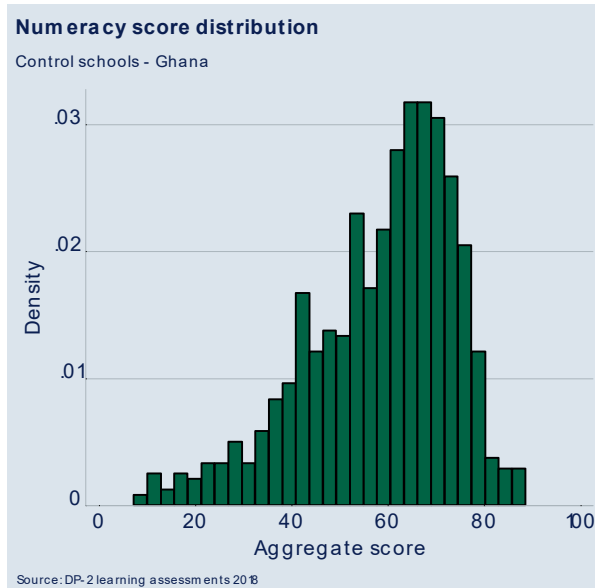
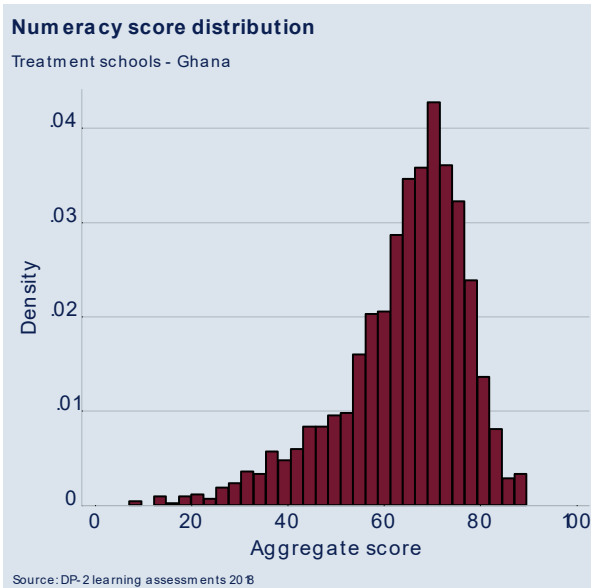
Numeracy scores in Kenya have a similar distribution in treatment and control schools. While the distribution is skewed to the right, there are no ceiling effects in the sense that there is further room for improvement.



Numeracy scores in Nigeria have a somewhat similar distribution in treatment and control schools, with a large amount of variability in the aggregate score. There is no evidence of any floor or ceiling effects.



Numeracy scores in Ghana have a similar distribution in treatment and control schools. While the distribution is slightly skewed to the right, there are no ceiling effects in the sense that there is further room for improvement.



Multiple regression analysis of factors associated with learning outcomes

Table 31: Factors associated with English literacy scores in Nigeria (OLS model)

Variables	Coefficient	Std err	T-stat	P-value
Rural location	-1.966	0.925	-2.125	0.036**
Age over 14	3.518	1.133	3.105	0.002**
Single orphan	0.497	0.592	0.840	0.403
Living without parents	0.721	1.061	0.679	0.498
Likelihood of living in extreme poverty (\$1.90 PPI)	-0.038	0.011	-3.455	0.001**
Head of household has no education	-0.463	0.292	-1.584	0.116
Speaks English at home	7.531	6.582	1.144	0.255
High chore burden	-1.179	0.391	-3.017	0.003**
Involved in labour (agricultural work or work outside the home)	-0.264	0.379	-0.697	0.487
Feels unsafe at school	1.575	0.989	1.594	0.114
PTR over 40	-1.893	1.087	-1.741	0.084*
% of unqualified teachers	0.465	1.186	0.392	0.696
No female teachers at the school	-0.192	0.595	-0.322	0.748
Poor infrastructure	-0.433	0.417	-1.038	0.302
Public school (as compared to religious or community school)	0.013	0.949	0.014	0.989
Caregiver has visited girl's school	-0.067	0.431	-0.155	0.877
Caregiver has attended a school meeting	1.001	0.371	2.701	0.008**
Caregiver listens to girl when making decisions	0.096	0.317	0.302	0.764
Level of self-efficacy	0.022	0.012	1.823	0.071*
<i>constant</i>	4.531	1.404	3.227	0.002**

Source: DP-2 learning assessments, girl, household and school survey 2018

Notes: (1) The regression model accounts for the clustered survey design and (2) Coefficients are standardised (3) Stars indicate level of statistical significance: *** p<.001, ** p<.05, * p<.01

Table 32: Factors associated with numeracy scores in Nigeria (OLS model)

Variables	Coefficient	Std err	T-stat	P-value
Rural location	-9.880	4.340	-2.277	0.025**
Age over 14	14.355	2.386	6.015	0.000***
Single orphan	1.414	2.216	0.638	0.525
Living without parents	-0.936	2.086	-0.449	0.655
Likelihood of living in extreme poverty (\$1.90 PPI)	-0.122	0.036	-3.364	0.001**
Head of household has no education	-2.124	1.154	-1.840	0.068
Speaks English at home	13.562	3.502	3.873	0.000***
High chore burden	0.847	1.232	0.687	0.493
Involved in labour (agricultural work or work outside the home)	-3.388	1.587	-2.134	0.035**
Feels unsafe at school	-2.684	2.178	-1.232	0.220
PTR over 40	-11.738	3.693	-3.179	0.002**
% of unqualified teachers	-9.220	5.288	-1.744	0.084*
No female teachers at the school	-3.137	3.457	-0.907	0.366
Poor infrastructure	-5.678	2.042	-2.780	0.006**
Public school (as compared to religious or community school)	-1.991	2.816	-0.707	0.481
Caregiver has visited girl's school	0.265	1.298	0.204	0.839
Caregiver has attended a school meeting	2.414	1.411	1.711	0.090*
Caregiver listens to girl when making decisions	0.189	1.108	0.171	0.865
Level of self-efficacy	0.104	0.042	2.470	0.015**
<i>constant</i>	49.913	4.005	12.461	0.000***

Source: DP-2 learning assessments, girl, household and school survey 2018

Notes: (1) The regression model accounts for the clustered survey design and (2) Coefficients are standardised (3) Stars indicate level of statistical significance: *** p<.001, ** p<.05, * p<.01

Table 33: Factors associated with English literacy scores in Kenya (OLS model)

Variables	Coefficient	Std err	T-stat	P-value
Age over 14	-3.779	2.483	-1.522	0.131
Single orphan	-0.715	1.606	-0.445	0.657
Living without parents	-2.608	1.794	-1.454	0.149
Likelihood of living in extreme poverty (\$1.90 PPI)	-0.149	0.027	-5.606	0.000***
Head of household has no education	0.123	1.521	0.081	0.935
Speaks English at home	5.378	1.067	5.039	0.000***
High chore burden	-1.414	1.289	-1.097	0.275
Involved in labour (agricultural work or work outside the home)	-2.466	1.074	-2.298	0.023**
Feels unsafe at school	-3.388	2.520	-1.344	0.182
PTR over 40	2.590	1.905	1.360	0.177
% of unqualified teachers	-8.362	4.282	-1.953	0.053*
No female teachers at the school	-3.136	4.573	-0.686	0.494
Non-formal school	3.769	2.073	1.818	0.072*
School in arid / semi-arid region	-2.400	2.004	-1.198	0.234
Caregiver has visited girl's school	1.367	1.562	0.875	0.383
Caregiver has attended a school meeting	1.006	0.997	1.009	0.315
Caregiver listens to girl when making decisions	2.388	1.246	1.917	0.058*
Level of self-efficacy	0.111	0.026	4.309	0.000***
<i>constant</i>	48.701	2.742	17.763	0.000***

Source: DP-2 learning assessments, girl, household and school survey 2018

Notes: (1) The regression model accounts for the clustered survey design and (2) Coefficients are standardised (3) Stars indicate level of statistical significance: *** p<.001, ** p<.05, * p<.01

Table 34: Factors associated with numeracy scores in Kenya (OLS model)

Variables	Coefficient	Std err	T-stat	P-value
Age over 14	-2.459	1.759	-1.398	0.165
Single orphan	-0.751	0.912	-0.823	0.412
Living without parents	-1.115	0.940	-1.185	0.238
Likelihood of living in extreme poverty (\$1.90 PPI)	-0.077	0.014	-5.510	0.000***
Head of household has no education	-0.473	1.101	-0.430	0.668
Speaks English at home	1.502	0.611	2.460	0.015**
High chore burden	-0.560	0.830	-0.675	0.501
Involved in labour (agricultural work or work outside the home)	-0.695	0.647	-1.074	0.285
Feels unsafe at school	-6.036	1.727	-3.495	0.001**
PTR over 40	1.274	0.945	1.348	0.180
% of unqualified teachers	-6.052	2.406	-2.515	0.013***
No female teachers at the school	-0.017	3.427	-0.005	0.996
Non-formal school	1.413	1.162	1.216	0.227
School in arid / semi-arid region	0.719	0.873	0.824	0.412
Caregiver has visited girl's school	-0.812	0.913	-0.889	0.376
Caregiver has attended a school meeting	1.624	0.608	2.672	0.009**
Caregiver listens to girl when making decisions	0.179	0.863	0.207	0.836
Level of self-efficacy	0.049	0.015	3.235	0.002***
<i>constant</i>	68.884	1.575	43.737	0.000***

Source: DP-2 learning assessments, girl, household and school survey 2018

Notes: (1) The regression model accounts for the clustered survey design and (2) Coefficients are standardised (3) Stars indicate level of statistical significance: *** p<.001, ** p<.05, * p<.01

Table 35: Factors associated with English literacy scores in Ghana (OLS model)

Variables	Coefficient	Std err	T-stat	P-value
Age over 14	-0.863	1.474	-0.586	0.559
Single orphan	1.637	1.772	0.924	0.358
Living without parents	1.219	1.538	0.793	0.430
Likelihood of living in extreme poverty (\$1.90 PPI)	-0.131	0.047	-2.793	0.006**
Head of household has no education	-2.984	1.536	-1.942	0.055*
Speaks English at home	6.126	1.385	4.422	0.000***
High chore burden	1.503	1.279	1.176	0.242
Involved in labour (agricultural work or work outside the home)	-6.151	2.029	-3.031	0.003**
Feels unsafe at school	-1.187	2.949	-0.402	0.688
PTR over 40	-1.003	2.289	-0.438	0.662
% of unqualified teachers	-6.116	6.274	-0.975	0.332
No female teachers at the school	-5.673	1.778	-3.191	0.002**
No water access	-7.911	3.809	-2.077	0.040**
No separate toilets for girls	1.179	2.432	0.485	0.629
Caregiver has visited girl's school	0.521	1.104	0.472	0.638
Caregiver has attended a school meeting	-0.112	2.124	-0.053	0.958
Caregiver listens to girl when making decisions	2.353	1.176	2.001	0.048**
Level of self-efficacy	0.091	0.029	3.194	0.002**
Central Gonja	-20.654	3.831	-5.391	0.000***

East Gonja	-13.728	3.648	-3.763	0.000***
Karaga	-17.831	2.549	-6.996	0.000***
Sagnarigu	-4.648	4.072	-1.141	0.256
Savelugu	-10.576	2.901	-3.646	0.000***
Tolon	-14.998	3.761	-3.988	0.000***
West Mamprusi	-17.017	2.560	-6.648	0.000***
Yendi	-15.623	3.215	-4.860	0.000***
<i>constant</i>	32.098	5.072	6.329	0.000***

Source: DP-2 learning assessments, girl, household and school survey 2018

Notes: (1) The regression model accounts for the clustered survey design and (2) Coefficients are standardised (3) Stars indicate level of statistical significance: *** p<.001, ** p<.05, * p<.01 (4) The base group for the districts is Tamale Metro.

Table 36: Factors associated with numeracy scores in Ghana (OLS model)

Variables	Coefficient	Std err	T-stat	P-value
Age over 14	-1.741	0.836	-2.082	0.040**
Single orphan	-0.078	1.320	-0.059	0.953
Living without parents	0.046	0.890	0.052	0.958
Likelihood of living in extreme poverty (\$1.90 PPI)	-0.090	0.037	-2.452	0.016**
Head of household has no education	0.160	0.816	0.196	0.845
Speaks English at home	2.568	0.807	3.183	0.002**
High chore burden	-0.646	0.744	-0.868	0.387
Involved in labour (agricultural work or work outside the home)	-0.415	1.052	-0.394	0.694
Feels unsafe at school	-4.549	1.606	-2.833	0.005***
PTR over 40	-1.680	1.219	-1.378	0.171
% of unqualified teachers	-4.119	3.140	-1.312	0.192
No female teachers at the school	-4.215	1.350	-3.122	0.002**

No water access	-3.691	1.731	-2.132	0.035**
No separate toilets for girls	0.826	1.375	0.601	0.549
Caregiver has visited girl's school	0.517	0.797	0.648	0.518
Caregiver has attended a school meeting	0.669	1.242	0.538	0.591
Caregiver listens to girl when making decisions	0.213	0.665	0.321	0.749
Level of self-efficacy	0.083	0.019	4.446	0.000***
Central Gonja	-5.386	2.694	-1.999	0.048**
East Gonja	0.908	1.435	0.633	0.528
Karaga	4.644	1.832	2.536	0.013**
Sagnarigu	5.448	1.384	3.938	0.000***
Savelugu	4.743	1.929	2.459	0.015**
Tolon	2.426	1.498	1.620	0.108
West Mamprusi	3.431	1.465	2.341	0.021**
Yendi	3.161	1.877	1.684	0.095*
<i>constant</i>	55.816	2.542	21.954	0.000***

Source: DP-2 learning assessments, girl, household and school survey 2018

Notes: (1) The regression model accounts for the clustered survey design and (2) Coefficients are standardised (3) Stars indicate level of statistical significance: *** p<.001, ** p<.05, * p<.01 (4) The base group for the districts is Tamale Metro.

Annex 20: Transition – benchmarking and cohort

Benchmark group														
Benchmark transition pathway														Baseline Transition rates
		Pre-baseline - 2017						Baseline - 2018						
Age	Sample size (#)	In-school progression	Moves into secondary school	Non-formal school	Vocational training	Employment	Drops out of school /Never enrolled	In-school progression	Moves into secondary school	Non-formal school	Vocational training	Employment	Drops out of school /Never enrolled	Successful transition rate per age (%)
Nigeria														
11	37	92%	0%	0%	0%	0%	8%	81%	11%	0%	0%	0%	8%	92%
12	48	75%	6%	0%	0%	0%	19%	67%	10%	10%	2%	0%	10%	88%
13	44	82%	9%	0%	0%	0%	9%	43%	36%	5%	2%	0%	14%	86%
14	38	66%	29%	0%	0%	0%	5%	45%	39%	5%	0%	3%	8%	89%
15	34	47%	38%	0%	0%	0%	15%	18%	50%	12%	0%	0%	21%	76%
Overall	201	72%	17%	0%	0%	0%	11%	51%	29%	6%	1%	1%	12%	86%
Ghana														
11	46	91%	4%	0%	0%	0%	4%	87%	7%	0%	0%	0%	7%	93%
12	28	96%	0%	0%	0%	0%	4%	93%	4%	0%	0%	0%	4%	96%
13	36	94%	6%	0%	0%	0%	0%	83%	17%	0%	0%	0%	0%	100%
14	32	81%	13%	0%	0%	0%	6%	72%	19%	3%	0%	0%	6%	94%
15	24	92%	8%	0%	0%	0%	0%	71%	29%	0%	0%	0%	0%	100%
Overall	166	91%	6%	0%	0%	0%	3%	81%	15%	1%	0%	0%	3%	96%
KENYA														
11	25	100%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	100%
12	31	97%	0%	0%	0%	0%	3%	97%	0%	0%	0%	0%	3%	97%
13	30	97%	0%	0%	0%	0%	3%	93%	3%	0%	0%	0%	3%	97%
14	28	93%	4%	0%	0%	0%	4%	75%	18%	0%	0%	0%	7%	93%

15	21	71%	24%	0%	0%	0%	5%	48%	48%	0%	0%	5%	0%	95%
Overall	135	92%	5%	0%	0%	0%	3%	83%	14%	0%	0%	1%	3%	96%

Annex 21: Sustainability Scorecard

Rating	Community	School	System
0 – Negligible <i>(null or negative change)</i>	No evidence that community members accept the project approach, and changes in attitude or engagement with activities very limited. Stakeholders may even reject key aspects of project. Project not working effectively to build consensus or support, but focus only on activity implementation.	No evidence that school stakeholders accept the project approach, and changes in attitude or engagement with activities very limited. Stakeholders may even reject key aspects of project. Project not working effectively to build consensus or support, but focus only on activity implementation.	Very limited and ineffective engagement with system level stakeholders, including district or national authorities. Authorities do not see relevance of intervention. There is limited alignment to existing systems / structures and policies, or limited understanding by project of how it intends to influence change at this level.
1 – Latent <i>(changes in attitude)</i>	Community stakeholders (including parents, community leaders, and religious leaders) are developing knowledge and understanding and demonstrate some change in attitude towards girls' education. Appropriate structures are being put in place at community level, and there is some level of willing engagement and/or participation from the community.	School leadership, teachers and other stakeholders are developing knowledge and understanding and demonstrate some change in attitude towards girls' education in general and towards specific teaching practice and approaches, and the way schools are managed.	Local, district, and national officials are involved in delivery and/or monitoring; developing knowledge, and showing change in attitude towards girls' education and project focus areas. Project aligns with specific policy, systems and departments. Project's evidence is being shared with relevant stakeholders, including broader networks of organisations.
2 – Emerging <i>(changes in behaviour)</i>	There is evidence of improved practice and support for girls' education in specific ways being targeted by project. Change is not universally accepted among targeted stakeholders, but support is extending. Project staff and resources play key role in driving change, although there are activities in place to mobilise funding/other resources.	There is evidence of improved support for girls' education in classroom practice, teacher management, and school management being targeted by project. The improved practice is not universal, but is extending. Project staff and resources play key role in driving change. School leaders understand resource implications and mobilising funds locally.	There is evidence of improved capacity of local officials to support girls' education through existing functions, adopting new approaches. Examples of support to project schools are being established. Government at local and/or national level has engaged with and understood evidence from the project. Resource implications are being made clear.
3 – Becoming established <i>(Critical mass of stakeholders change behaviour)</i>	Key community leaders and a critical mass of stakeholders are convinced of the benefits and have the capacity to lead and deliver changed practice independently. Financial and other resources are increasingly being mobilised locally. Project staffing and resources still play role but there is potential for this to be phased out.	Head teacher and critical mass of school staff and stakeholders convinced of the benefits and have the capacity to deliver changed practice independently. To the extent possible, existing financial and other resources are being used or mobilised. Project staffing and resources still play role but there is potential for this be phased out.	Authorities demonstrate active use of project evidence, uptake of specific aspects of the project approach and have a growing capacity to support girls' education locally or beyond. This may include limited support to a delivery model without fully adopting within a national system. There is an increase in allocation of resources and evidence of planning for required resource to upscale.
4 – Established <i>(changes are institutionalised)</i>	The specific change in practice and attitude is now well established. Communities demonstrate independent ability to act without support from project, are able to further develop existing and new initiatives and secure funding to respond to their local needs to sustain and build on the changes that have taken place.	The specific change in practice and attitude is now well established with school level systems to support this; schools demonstrate independent ability to act without support from project, have allocated and mobilised financial and other resources and are able to develop further initiatives to respond to local needs to sustain and build on the changes that have taken place.	An approach or model is shown to work at scale and is being adopted in national policy and budget as appropriate, and/or incorporated into key delivery systems (e.g. for teacher training, curriculum, school management etc.). There is an established track record of financial support.

Source: GEC – T MEL Guidance Part 2

Annex 22: DP-2 Sustainability Framework Analysis



Sustainability
Analysis Sheet - for su

Annex 23: Lesson Observation Instrument Information

Classroom management

The three questions in this section are:

- The teacher does not allow any group or individual to disrupt other pupils' learning.

0 (not met)	There are lots of disruptions or the teacher makes no attempt to control the disruption.
1 (met)	There is some minimal disruption but the teacher does not allow it to continue.
2 (met to a high standard)	Pupils behave well and react towards each other and the teacher in a respectful and co-operative manner.

- The teacher gives attention and support to pupils equally.

0 (not met)	The teacher limits their attention to only a small group of pupils, even if this is gender balanced.
1 (met)	The teacher interacts with a number of pupils in various parts of the classroom, but does not take care to do so in a gender-balanced way.
2 (met to a high standard)	The teacher takes care to interact with a wide range of pupils and with boys and girls equally.

- The teacher maintains a calm and supportive atmosphere.

0 (not met)	The atmosphere in the classroom is wholly or mainly not calm and/or supportive.
1 (met)	The teacher is clearly intent on maintaining a calm and supportive atmosphere and is largely successful with only minor lapses.
2 (met to a high standard)	The atmosphere is fully calm and supportive.

Numeracy Classroom environment

- There are displays of work produced by both girls and boys that show and celebrate their skills and achievements in numeracy. (There is a slight variant for girls only schools).

Scores were assigned according to the following criteria:

0 (not met)	There is nothing displayed
1 (met)	There are displays of work which celebrate the pupils' skills and achievements in numeracy, but are not necessarily gender balanced.
2 (met to a high standard)	The work displayed is of high quality, demonstrates the pupils' skills and achievements in numeracy and is gender balanced.

There is material on display (for example: posters, diagrams, charts, lists of mathematical terminology, drawings) to aid the development of pupils' mathematical vocabulary and support mathematical thinking and communication.

Scores were assigned according to the following criteria:

0 (not met)	There is nothing displayed
1 (met)	There is some material displayed which explains, for example, mathematical vocabulary or how to carry out certain calculations; but it is very limited – there is little of it and there is little or no attempt to display it attractively.
2 (met to a high standard)	There is a range of helpful material which is displayed in ways likely to attract pupils' attention and provide them with support.

- The classroom environment offers a safe, supportive and socially inclusive space for all pupils irrespective of gender, ability, socioeconomic or cultural background.
 - A **safe space** is one where everyone is safe physically and emotionally, free from abuse and harassment. It is a place where everyone in that space feels welcomed and can voice an idea or opinion without fear of being teased or threatened.
 - **Social Inclusion** is a process by which efforts are made to ensure equal opportunities for all. The process is aimed at creating conditions which enable the full and active participation of every member of the society in all aspects of life. Groups may be excluded based on gender, disability, socio-economic group, cultural group, geographic origins, age or other criteria.

Scores were assigned according to the following criteria:

0 (not met)	The classroom is not a safe and socially inclusive space.
1 (met)	Only one of the two conditions (either a safe or a socially inclusive space) are met/
2 (met to a high standard)	Both conditions are met (i.e. the classroom is both a safe and a socially inclusive space).

Literacy classroom environment

- There are displays of work produced by both girls and boys that show and celebrate their skills and achievements in literacy. (There is a slight variant for girls only schools).

Scores were assigned according to the following criteria:

0 (not met)	There is nothing displayed
1 (met)	There are displays of work which celebrate the pupils' skills and achievements in literacy, but they are not necessarily gender balanced.
2 (met to a high standard)	The work displayed is of high quality, demonstrates the pupils' skills and achievements in literacy and is gender balanced.

- There are visual aids (e.g. object labels, "talking walls") displayed on the classroom walls to support the teaching and learning of literacy.

Scores were assigned according to the following criteria:

0 (not met)	There is nothing displayed
1 (met)	There is some material displayed to aid the development of literacy
2 (met to a high standard)	There are displays on the wall to aid the development in literacy and they are of good quality.

- The classroom environment offers a safe, supportive and socially inclusive space for all pupils irrespective of gender, ability, socioeconomic or cultural background.
 - A **safe space** is one where everyone is safe physically and emotionally, free from abuse and harassment. It is a place where everyone in that space feels welcomed and can voice an idea or opinion without fear of being teased or threatened.
 - **Social Inclusion** is a process by which efforts are made to ensure equal opportunities for all. The process is aimed at creating conditions which enable the full and active participation of every member of the society in all aspects of life. Groups may be excluded based on gender, disability, socio-economic group, cultural group, geographic origins, age or other criteria.

Scores were assigned according to the following criteria:

0 (not met)	The classroom is not a safe and socially inclusive space.
1 (met)	Only one of the two conditions (either a safe or a socially inclusive space) are met.
2 (met to a high standard)	Both conditions are met (i.e. the classroom is both a safe and a socially inclusive space).

Numeracy units of study

Which one or more of the following is the content area of the lesson?	Guidance
(a) Numbers and operations	<p>This content area includes:</p> <ul style="list-style-type: none"> • counting in various ways • number meaning • number magnitude • four basic operations (addition, subtraction, multiplication, division) • computing using a variety of tools and strategies • more-and-less relationships • part-whole relationships • the role of “benchmark” numbers such as 5 and 10 • connections between numbers and the real world
(b) Measurement	<p>This content area includes:</p> <ul style="list-style-type: none"> • quantities and measures in the environment • measurable attributes of objects • units and processes involved in measurement • use of non-standard units • use of basic metric units to measure quantities, such as length, area, volume, capacity, mass, and temperature • telling time • computing elapsed time • relationships among measurement units • relationships involved in calculating the perimeters, areas, and volumes of a variety of shapes and figures
(c) Geometry and spatial sense	<p>This content area includes:</p> <ul style="list-style-type: none"> • knowledge of objects in relation to oneself • recognising basic shapes and figures • distinguishing between the attributes of an object that are geometric properties and those that are not • investigating the shared properties of classes of shapes and figures • Mathematical concepts and skills related to location and movement.
(d) Patterning and algebra	<p>Formal algebra is generally not included in a Class 1 6 syllabus, but primary teachers build the foundations necessary for formal algebra by providing opportunities for algebraic thinking. Pupils’ later success requires foundational abilities to detect and generate patterns and to generalize those patterns symbolically. In addition, building a foundational understanding of the equal sign as representing a relationship between two equivalent quantities is important.</p> <ul style="list-style-type: none"> • identifying patterns in shapes, designs, and movement, as well as in sets of numbers • recognising repeating patterns and growing and shrinking patterns • extending patterns accurately • identifying some of the properties of the pattern • using graphs, tables, and verbal descriptions to represent relationships that generate pattern • looking at different ways of using numbers to represent equal quantities
(e) Data management and probability	<p>This content area provides a bridge to other topics, such as ratios, fractions, percent, and decimals. Connecting to real-world problems or pupil interests helps make the learning relevant to pupils.</p> <ul style="list-style-type: none"> • different ways to gather, organise and display data

- types of data
- techniques for analysing data

Notes on free text descriptions

Numbers and operations content revolved around arithmetic operations. About a third in Kenya, 10 percent in Nigeria and 40 percent in Ghana involved decimals and fractions. About 20 percent in Kenya involved lengths and distances (but none in the other countries).

Not much additional information was provided about *geometry lessons* other than verifying that they were about shapes. Similarly with *algebra*, not many details were provided.

The majority of *measurement* content involved basic units of measurement (length, weight, time) and how to measure an object. Some in Kenya included calculating the circumference, area or volume of shapes or objects.

In Nigeria, *data management and probability* lessons focused on probability. In Ghana they taught averages, collecting data and producing graphs. In Kenya they were mostly about fractions and therefore might be better categorised with the *numbers and operations* lessons.

Aspects of numeracy

Which one or more aspect of numeracy is the focus of the lesson?	Guidance
<p>(a) Understanding of mathematical concepts (for example: number sense, place value, counting concepts)</p>	<p>Comprehending mathematical concepts, operations, and relations— knowing what mathematical symbols, diagrams, and procedures mean. A pupil who has conceptual understanding can, for example:</p> <ul style="list-style-type: none"> • represent mathematical concepts or ideas differently or in multiple ways (for example, being able to represent a number like 6 as 1 more than 5, as being between 5 and 7 on the number line, as being the same as X X X X X X, as being the same as two groups of 3) • identify whether a real-life situation involves the concept of addition, subtraction, multiplication, division and explain why • describe the relative size of numbers (whether a number is larger or smaller than another number and why, or whether it is a lot or a little larger or smaller and why) • place a given number on a number line and explain why it belongs there <ul style="list-style-type: none"> • describe the relationship between addition and subtraction (or between multiplication and division); given a subtraction question, for example $7 - \underline{\quad} = 3$, identify the equivalent as addition • describe the relationship between different shapes or objects, or numbers (for example, the relationship between a cylinder and a cone, or between a square and a rectangle, or the relationship between fractions and decimals) <p>Number sense is not a specific skill but encompasses a pupil's ability to think and reason flexibly. A child has a sense of what numbers mean, understands their relationship to one another, is able to perform mental</p>

	<p>mathematics, understands symbolic representations, and can use those numbers in real world situations.</p> <p>“Foundational number sense” refers to the understanding of numbers that children develop early on in their life.</p>
(b) Mathematical communication: vocabulary (development and appropriate use of mathematical vocabulary)	<p>Mathematical communication includes both oral and written communication. It includes:</p> <ul style="list-style-type: none"> • expression and organization of ideas and mathematical thinking (clarity of expression, logical organization), using oral, visual, and written forms (e.g. pictorial, graphic, numeric, concrete materials) • communication for different audiences (e.g. peers, teachers) and purposes (e.g. to present data, justify a solution, express a mathematical argument in oral, visual, and written forms) • use of conventions, vocabulary and terminology (e.g. terms, symbols)
(c) Mathematical communication: reasoning and justifying (ability to explain what mathematical procedures were used, why they were used, and why they were the most efficient ones)	<p>This requires a pupil to be able to:</p> <ul style="list-style-type: none"> • explain how a problem was solved and why • explain why one strategy or procedure is more efficient than another • explain and adapt their thinking to address a problem as it changes and evolves; or as they encounter new, similar problems <ul style="list-style-type: none"> • justify an answer to a question • question the justification given by another learner
(d) Mental mathematics	<p>Mental mathematics isn't about memorisation, but about using and manipulating strategies and procedures quickly to calculate a given problem. Some teachers refer to mental mathematics as “No pencil mathematics”</p>
(e) Procedural fluency – using mathematical procedures accurately and efficiently	<p>Procedural fluency refers to knowledge of procedures; knowledge of when and how to use them appropriately; and skill in performing them flexibly, accurately, and efficiently.</p> <p>While procedural fluency involves memorising (for example multiplication tables) it also involves thinking. Pupils must know when, not just how, to use a procedure and be able to use it flexibly, accurately, and efficiently.</p>
(f) Problem solving	<p>May also be referred to as strategic competence</p> <p>The ability to formulate, represent, and solve mathematical problems. For example:</p> <ul style="list-style-type: none"> • create mathematical problems based on a variety of realistic situations (e.g. Musa saw six shoes in front of his grandfather's room, how many people were in the room? $6 \div 2 = 3$) • use drawings, models such as a number line or counters, or equations to accurately represent a mathematical problem • identify and evaluate different strategies for solving a given problem • use a selected strategy (e.g., using an algorithm for addition; drawing a number line to successfully solve a given problem)

Numeracy teaching and learning approaches

Are the approaches to the teaching and learning of numeracy appropriate and effective?	Guidance
(a) The teacher uses relevant physical models, objects,	Example of bundling (paired work – creating bundles of 10):

<p>drawings, pictures and diagrams to aid mathematical understanding (for example: bundling to develop the concept of place value)</p>	<ul style="list-style-type: none"> ○ Divide pupils into pairs. Distribute a bundle of 100 straws and elastics to each pair. Ask pupils to remove the elastic so they have 100 loose straws. <ul style="list-style-type: none"> ○ Model how to create a bundle of 10. ○ Ask each pair to create ONE bundle of 10. ○ Ask pupils to hold up their completed bundle when they have completed the task. Circulate to check that pupils have 10 straws in their bundle. ○ Have pupils repeat this 9 more times, until they have 10 bundles. ○ Next, model ones by holding up a bundle of 10 and a single to make 11. Do a few examples. <p>Note: Some teachers may use one coloured counter to represent a 10 and a counter of another colour to represent ones. Using coloured counters in this way does not offer an accurate model for place value. They do not show, for example, that a 7 in the tens place represents a very different quantity than a 7 in the ones place. With coloured counters, the two digits look like they have the same value. Teachers might also want to be wary if using the abacus which uses identical objects to represent different values. This can lead to confusion.</p>
<p>(b) The teacher engages all pupils actively in mathematics (for example: games and other activities that involve them in observation, investigation, reasoning, discussion, communication and reflection using drama, art, music or movement)</p>	<p>Encouraging mathematical reasoning: Teachers can encourage mathematical reasoning by providing problems that can be solved in various ways and by asking pupils to explain, draw or demonstrate how they arrived at an answer. For example, asking pupils to identify all of the ways that blocks can be combined to make the sum of 10 encourages them to reason about the patterns and relationships in the numbers from 1 to 10 and eventually to extend their reasoning to all the numbers between 10 and 20, then between 20 and 30, and so on, to 100.</p>
<p>(c) The teacher explains mathematical vocabulary and concepts clearly by making connections from the known to the unknown</p>	<p>For example:</p> <ul style="list-style-type: none"> ○ introducing mathematics vocabulary using relevant objects, pictures and/or diagrams. Visuals are KEY! ○ clearly explaining word meanings and make connections from known to unknown <ul style="list-style-type: none"> ○ modelling how to use mathematical terms correctly ○ integrating mathematics and mathematical language
<p>(d) The teacher fosters pupils' number sense including understanding of numbers, relationships and mental mathematics</p>	<p>For example:</p> <ul style="list-style-type: none"> • Developing counting strategies: <ul style="list-style-type: none"> ○ counting orally – forward and back <ul style="list-style-type: none"> ○ touch and count ○ move and count ○ line up and count <ul style="list-style-type: none"> ○ count on ○ recount ○ counting by 2, 5, 10s • Connecting number symbols and words with quantities • Building a sense of ten: Use strategies and tools to develop an understanding of 10. Ten-Frames are rectangular frames where counters are placed to illustrate numbers less than or equal to ten. • Finding missing numbers: Use number lines, number charts and other tools that require pupils to find missing numbers and justify how they know that number is the missing number. • How many ways? Provide opportunities for pupils to demonstrate the various ways they can make a number.
<p>(e) The teacher provides opportunities for pupils to</p>	<ul style="list-style-type: none"> • Using models to represent mathematical ideas or concepts: Pupils need to use accurate mathematical representations and models to

<p>demonstrate understanding and application of mathematical concepts and procedures (for example: through written work, use of mathematical models, role play)</p>	<p>deepen understanding of mathematical concepts. Physical models, drawings and diagrams can help with problem-solving as well as with understanding procedures.</p> <ul style="list-style-type: none"> • Using models broadly: many teachers limit the use of models in various ways: <ul style="list-style-type: none"> o Using for some lessons/concepts, but not others. For example, using counters for concepts like counting, but not extending the use to teach addition or subtraction. o Insufficient duration of use: using teaching and learning materials (TLMs) to teach addition and subtraction but move to symbolic representations too soon before the concept is understood. • Using accurate models: pupils' misunderstandings can stem from an inaccurate use of objects or diagrams to represent mathematical concepts. (eg: using only one coloured counter to represent the number 10) • Hands ON! Many teachers use models to demonstrate concepts in front of the class, but do not give pupils the opportunity to hold and use materials. When using objects, each child needs access. Using TLMs where pupils are divided into very large groups is not sufficient, as many pupils remain disengaged and do not get an opportunity to use the TLMs.
<p>(f) The teacher helps pupils to appreciate the value of mathematics in their lives and where it fits naturally and usefully in their homes and elsewhere</p>	<p>For example, a unit on telling time:</p> <ul style="list-style-type: none"> o Brainstorm: List as many ways you can think of to keep track of time. <ul style="list-style-type: none"> o Question: The answer is 60 minutes, what is the question? o Reverse: List 10 things that you would not time in seconds. o Design: Design a new and improved clock face, justify your improvements. o What if? What if you could design your own school time table, what would it look like? o Construct: Construct a timeline of your daily activities using a 24-hour clock. o Commonality: Think of different objects and what they have in common with a clock. o Alternatives: List ways you can measure a minute other than using a watch, clock, timer or stop watch. List your ideas from most effective to least effective.
<p>(g) The teacher requires pupils to communicate their mathematical knowledge and understanding in a variety of ways (for example, writing, drawing, diagrams, graphics, talking, modelling)</p>	<p>Data management, for example, may include:</p> <ul style="list-style-type: none"> o visual height chart: pupils use a cut out circle and draw their heads, measure their heights and attach a strip of paper of the appropriate length to the circle o my family book: each pupil is given a large piece of paper and draws their family in a row from small to tall. Each drawing is stapled together as on big book for discussion on short, shorter, shortest, tall, taller tallest o timelines: pupils create a timeline on a strip of paper from birth to age six, drawing pictures to show different points in their life <ul style="list-style-type: none"> o favourites graph: pupils choose their favourite colour, favourite subject at school, favourite food, favourite month of the year
<p>(h) The teacher displays an enthusiasm for mathematics and encourages pupils to have a 'can do' attitude (that is, emphasises the importance of effort rather than innate ability)</p>	<p>The teacher conveys enthusiasm through voice and body language; has a good rapport with pupils; uses encouragement and praise to give positive feedback; calls on pupils by name to make a contribution to the lesson</p>

Numeracy assessment strategies

How effectively does the teacher assess and provide feedback on the pupils' work during and at the end of the lesson?	Definition / description
By using strategies such as quizzes, number stories and 'teach a friend'	<p>Number Stories: Write me a story that shows $20 + 33$. Your story must include the solution to the problem</p> <p>Teach a Friend: Pair students up and have them "teach" their partner about the concept or process.</p>
By using both closed and open-ended questioning	<p>Open-ended questions have more than one possible answer. They encourage speculation and require more than a 'yes' or 'no' answer or the recall of information.</p> <p>Examples include:</p> <ul style="list-style-type: none"> 'Give me a number greater than 30' – there are infinite correct answers. 'Give me a number between 10 and 20' – there are only nine correct answers, but this is considered open as there are more than one.
By supportive questioning	For example, the teacher gives the pupil time to think before they respond; when necessary the teacher repeats and/or rephrases the question
By checking pupils' knowledge and understanding during the course of the lesson and modifying the approach as necessary	<p>Looking for gaps in learning or misunderstandings so that they can be addressed in future lessons.</p> <p>For example, midway through a unit of study, asking pupils to list ten things they have learnt during the unit. The teacher should gather the lists and read through them.</p>
By checking pupils' mastery level at the end of the lesson	For example: by asking them to identify any aspects of the work they feel the need to review

Scores were assigned according to the following criteria:

0 (not observed/used)	The approach is not observed.
1 (met)	The teacher is making some attempt at using the approach.
2 (met to a high standard)	The teacher is using the approach effectively.

Observer comments on numeracy assessment strategies

Enumerators provided examples of open-ended questions for some of the lessons that were rated as '2' for *closed and open-ended questioning*. They were similar across all countries and include:

- What are the common divisors of given numbers?
- Explain how you read the time from a clock.

- Explain how you calculate a problem (e.g. multiplication, unit conversion)
- What are some shapes that have 90 degree angles?

Where comments identified why lessons rated as '1' were not awarded a '2', it was because they included only limited questioning (maybe only requiring recall) or exclusively used closed questions.

It is not clear how well targeted the questions are, but an enumerator in Kenya commented on one lesson that 'learners gave answers without difficulty'.

For the majority of lessons rated '2' for *supportive questioning*, numerators described the teaching allowing pupils time before they answered questions and repeating and rephrasing questions so that pupils understood them.

Not many comments attached to lessons rated as a '1' explained why they were not a '2', but those that did suggested that the questioning was limited in the number of questions asked or the number of pupils involved.

Teachers *checked pupils' understanding during the lesson* through questions answered orally, in exercise books and (to a lesser extent) in groups. In Kenya, in about half of the lessons rated '2', enumerators described teachers marking pupils' exercise books or the work of a few pupils on the board. In Nigeria and Ghana, teachers appeared to almost entirely rely on verbal questions and worked examples on the board.

Teachers *checked pupils' master at the end of the lesson* by setting work to be completed at the end of the lesson or as homework. In a few cases they asked pupils if there was anything they had not understood.

Literacy units of study

Which one or more of the following is the content area of the lesson?	Guidance
(a) Oral language development	<p>Oral Language Development: Most children come to reading with a lot of oral language experience. They acquire most of what they know about oral language by listening and speaking with others. Through experience with oral language, children build vocabulary awareness of vocabulary meaning and an awareness of language structure. Include many opportunities for authentic listening and speaking.</p>
(b) Book knowledge and print concepts (awareness of how language is communicated through print)	<ul style="list-style-type: none"> • The term "concepts of print" refers to awareness of how language is communicated through print. These concepts include: • directionality (knowing that English text is read from left to right and top-to-bottom); • differences between letters and words (words are made of letters, and there are spaces between words); <ul style="list-style-type: none"> • awareness of capitalization and punctuation; and • common characteristics of books (such as the front/back, title, and author, illustrator), the difference between the text and the illustration.

<p>(c) Phonological awareness (the sound structure of language: for example: recognising rhymes, comparing words, isolating or blending sounds)</p>	<ul style="list-style-type: none"> • Phonological awareness is a listening and speaking skill rather than a print skill. • Recognising and generating rhymes in stories, poems, songs • Listening for pattern, such as letter repetition: the big, black bird <ul style="list-style-type: none"> • Comparing words: which word sounds longer, which sounds shorter? • Isolating sounds: isolating phonemes; for example, “Tell me the first sound in cat.” • Identifying sounds: recognising common sounds in different words; for example, “Tell me the same sound in ball, book, bag.” • Categorizing sounds: identifying the word with the odd sound in a sequence; for example, “Which word does not belong: sat, sag, rug?” • Segmenting sounds: breaking the word into separate sounds; for example, “What are the sounds in bat?” • Blending sounds: this is the reverse of segmenting. Once a pupil can say the sounds separately they gradually blend them, combining separate sounds to form a word; for example, [b-a-t] for bat.
<p>(d) Alphabet knowledge</p>	<p>Alphabet Knowledge: Alphabet Knowledge is the ability to name, distinguish shapes, write, and identify the sounds of the alphabet.</p>
<p>(e) Phonics and decoding (using knowledge of letter-sound correspondence to decode words)</p>	<p>Most current educational reforms on literacy are based on a synthetic phonics approach.</p> <p>The focus is on the 44 phonemes (sounds) and how each can be represented. This enables pupils when, for example, they come across: <i>placè, kiss and sell</i>, to understand that phonemes /s/ can have many spelling choices: <i>çè, sš and ś</i></p> <p>Sight Word: A sight word is a word that does not follow the typical decoding rules. These words have to be memorized because they cannot be sounded-out. These words are sometimes referred to as “camera words”. Examples: the, was, who. But even decodable words eventually need to be read “on sight”. Pupils need to be able to read many “high frequency” words on sight, some of which are decodable and some of which are not. Roughly 80% of English words are phonetic and can be sounded out with knowledge of the 44 phoneme sounds. However, many of the early reading words are not decodable. (More examples: said, where)</p>
<p>(f) Fluency building (read accurately, swiftly, and with correct expression)</p>	<p>Pupils pass through various reading (and writing) stages as they learn to read. Different experts provide slightly different labels for these stages, but they all provide a structure for understanding the reading development process. Some refer to these stages as; emergent, beginning, transitional, independent and advanced.</p> <p>Fluent readers do not have to concentrate on decoding words. As a result, they can pay attention to the meaning of what they read. Fluency is the bridge between word recognition and comprehension. The concept of independent reading level is important; it is that level at which the pupil recognises more than 95% of the words they read and can read effortlessly.</p> <p>Elements of fluency: accuracy, speed, expression</p> <p>It is important to provide explicit instruction to pupils during oral reading to develop reading expression.</p>
<p>(g) Vocabulary development</p>	<p>In order for pupils to develop fluency that leads to comprehension, teachers need to use strategies for developing strong oral, reading and written vocabulary.</p>

(h) Text comprehension, listening and reading	Fluency + Vocabulary development > Comprehension Although pupils are initially limited in what they can read independently, comprehension instruction should start when they enter school. Even before pupils can read for themselves, teachers can build vital background knowledge and comprehension skills by reading interactively and frequently to pupils from a variety of texts.
(i) Written expression	From class 1 onward, pupils should benefit from almost daily writing. While they are building the skills of letter formation, spelling, and sentence writing, pupils should also be taught about the writing process; generating and organizing ideas, producing a draft, sharing ideas with others for the purpose of gaining feedback, revising, editing, proofreading, and final product. Teaching writing strengthens reading skills and the more pupils write the better they read.
(j) Spelling and handwriting	Fluent, accurate letter formation and spelling are associated with pupils' production of longer and better-organised compositions and stories. Word usage, handwriting, punctuation, capitalization, and spelling are the necessary conventions of written expression that must be taught alongside strategies for composing.

Literacy teaching and learning approaches

Are the approaches to the teaching and learning of literacy appropriate and effective?	Guidance
(a) Pupils are given opportunities to speak and listen to the teacher and other pupils	
(b) Pupils are taught how language is communicated through print	
(c) The teacher uses a range of activities to teach pupils the sound structure of language	<p>Examples of phonemic awareness activities:</p> <ul style="list-style-type: none"> • Clap-stamp-hop: model the way an action can be used for each sound. Ask pupils to clap, stamp or any other action as they hear each letter sound. • Phoneme mat: first demonstrate how you use a marker (bottle cap, stone or bean) in each space to show how many sounds you hear in a word. Next, ask pupils to create a phoneme mat with three, four or five spaces. As you say a word, pupils place a marker in each space to represent each sound they hear. You can use seeds, bottle caps, beads or whatever is available, as markers. • Bounce/pass the ball: you can make phoneme identification into an engaging, fun game by asking pupils to bounce a ball for each sound they hear, pass the ball from one person to the next for each sound they hear, or place the ball in a container for each sound they hear. • Large phoneme mat: create a large phoneme mat (sound mat) on the classroom floor or outside. Ask pupils to stand in a circle around the large mat and pupils take turns hopping or jumping from one square to the next as they hear a sound. They stop and stay in the square they are in when they hear the last sound of the word. The whole class repeats the word slowly with the teacher and counts the squares to see if their classmate is in the correct spot. • Bead counter: string beads on a thick string so that beads will stay in place when moved. As you say a word, pupils move one bead at a

	<p>time to the right as they hear each sound. When finished pupils count the beads to tell you how many sounds they heard.</p>
<p>(d) Pupils are taught the phonic rules</p>	<ul style="list-style-type: none"> • Every syllable in every word must have a vowel. • Consonant-Vowel-Consonant (CVC) words “dog” “cat” “big” “beg” “bug” <p>When a single vowel is closed in by a consonant on both sides. The vowel is usually short (unless the silent e rule applies!). These are (CVC) words. Some exceptions are: was, put</p> • Consonant-Vowel (CV) words/Open syllable “he” “hi” “go”, “so” <p>An open syllable is one in which a single vowel is the final letter of a syllable. The vowel is usually long although there are frequent exceptions to this rule, it is still worth teaching this rule. These are Consonant-Vowel (CV) words. Some exceptions are: to, do</p> • Vowel-Consonant (VC) Words “an”, “ant”, “end”, “in”, “up”, “on” <p>If a word or syllable has only one vowel and it comes at the beginning of a word, the vowel is usually short. These are Vowel-Consonant (VC) Words.</p> • Silent e “date” “pipe” “pope” “rude” <p>When a syllable ends in a consonant, followed by a silent e, the vowel preceding the consonant is usually long. Teachers often say, “the vowel says it’s name”. Some exceptions: have, come, none, give</p> • Vowel Pairs: (also referred to as “vowel teams”) “sail” “peak” “pie” “boat” “toe” “glue” <p>When two vowels appear next to each other within a syllable, they make one sound. These are often long vowel sounds. (ai, ay, ea, ee, ie, oa, oe, ue). Teachers often say “When two vowels go walking, the first one does the talking and says its’ name.” There are many exceptions but most primary teachers find this rule helpful in the early, introductory stages of reading. Some exceptions: bread, read, thread. Also, some vowel pairs make a new sound as in: cloud or boil. R-Controlled syllable: A vowel followed by an “r”. R-controlled vowels are: ar, er, ir, or, ur as in, “bar” “her” “first” “for” “fur” (in some contexts the “r” is referred to as a “silent r”) When a vowel is followed by letter “r” the sound of the vowel is controlled by the r-sound. It stands for a special sound that is neither long nor short. Some exceptions: war, furniture Guidance to teachers: Always phrase rules in simple terms for young children and in ways that can help them to remember. Ensure simplicity and meaning asking pupils to look, listen and try to generalize and come up with their own rules based on the pattern they see.</p>
<p>(e) Pupils are taught to use knowledge of the sounds that letters make to decode words</p>	<p>Examples of developing decoding strategies</p> <p>Matching of 44 sounds with pictures that have meaning in the child’s context:</p> <ul style="list-style-type: none"> • Matching onset and rime to pictures • Matching consonant blends to pictures • Naming and labelling objects brought into the classroom to teach and reinforce phonics

	<ul style="list-style-type: none"> • Naming and labelling objects in the classroom to teach and reinforce phonics • Naming and labelling words thematically, such as colours, body parts, animals on the farm, clothing • Reading simple stories that include explicit teaching, identification and reinforcement of phonics • Word Walls: Word wall can be word families, plurals, irregular verbs, vocabulary related to a theme, etc. it is basically a list of words that pupils use as a reference • Letter cards or bottle cap letters: Manipulating letters to make words • Onset, syllable and rime cards: cards pupils can use to make words • Word cards: Matching words that sound the same, words that begin with same letters and the same sound, words that begin with the same letter but different sound (eg: go, giraffe) • Air writing • Pupils moving their bodies to make letter shapes
<p>(f) Pupils are helped to read accurately, swiftly and with correct expression</p>	<p style="text-align: center;">Suggestions to teachers on creating a culture of reading</p> <ul style="list-style-type: none"> • Create a low-risk environment that encourages pupils to speak, read, write and listen • Praise effort and work on confidence building • Explicitly voice the role of reading in learning and self-empowerment (if you can read you can ...) • Model your own love of reading and enjoyment of books • Read stories purely for enjoyment • Encourage reading of environmental text and incorporate this into lessons. (road signs, food labels etc) • Provide opportunities for pupils to choose books/stories • Tap prior knowledge before reading, providing opportunities for various forms of pupil reflection and response • Select books / stories that are relevant to the lives of pupils • Read print all around us. (road signs, sign boards, labels on food)
<p>(g) Pupils' oral and reading vocabulary is expanded</p>	<p style="text-align: center;">Example based on the book "Brown"</p> <ul style="list-style-type: none"> • Paired or groups discussion: Oral vocabulary is needed to support reading and text comprehension. Provide opportunities for pupils to talk about themes such as: What do I like? What do I see in the classroom? What do I see that is brown? (uniform, chair etc). How are these things different? (some are soft, some are hard, some are made from ...) During whole-class discussion everyone may not get a chance to speak but in paired work everyone talks! • Brainstorming: What do you think of when I say the word "Brown"? What other words could I use to talk about these things? (to draw out example of adjectives) • Predictions: The title of the book is Brown. What do you think we will see in the book? • Word Web: Place the term at the centre and ask pupils to share ideas on what is brown. Ask probing questions that will help make links between their prior knowledge and vocabulary that is in the book they are about to read, such as for the book Brown; • What can we say about things that we wear? What can we say about things that we eat?

	<p>What can we say about animals?</p> <ul style="list-style-type: none"> • Probe to draw out the word “wood”: A branch is brown. What can we get from a branch or a tree? • Prompt 1: We use it to build furniture. Prompt 2: I see some on your desk. (point to wood) • Extending concept mapping or brainstorming to build further on language such as using words generated to create sentences. The teacher can create a sentence structure and pupils continue the pattern such as; <ul style="list-style-type: none"> My uniform is brown My cow is brown My cat is brown
(h) The teacher reads interactively to pupils	
(i) The teacher employs comprehension strategies (for example: story re-telling, story maps, diagrams)	<p>Venn Diagrams: Select two things to compare: characters in stories, 2 animals, plants and animals, etc. Model how to write similar elements in the space where the two circles meet and the unique elements of each one in the spaces where each circle is separate Encourage pupils to complete their own Venn diagrams to compare two texts, characters, etc.</p> <p>Story Retelling: Pupils can be asked to retell the story through various mediums such as story sequence cards, dramatization, a story board.</p> <p>Story Maps: Pupils can prepare charts that use a combination of drawing and writing to demonstrate their understanding of a story. The “maps” can focus on areas such as, main characters, supporting characters, setting, the events/story sequence (beginning-middle-end), the problem, the solution and can be used for questioning on who, where, when, what, how or why?</p>
(j) The teacher generates enthusiasm and appreciation for reading	<p>Be explicit in praising reading success, not just “good” or “good job”, but what they do well. “I really like the way you looked at the part of the word you already know first, that was great strategy.”</p>
(k) Pupils are helped to develop their writing skills	<p>Writing: There are many ways to reinforce vocabulary and comprehension through post writing activities. These can be done orally at first and gradually move to writing.</p> <ul style="list-style-type: none"> • Continuing the pattern of the story: Pupils copy or create a pattern based on a book read in class to create their own books, such as “I like to read to ...”. They can create a class, group or individual book. • Summarizing what they learnt • Responses to texts: pupils are given sentence stems in order to encourage responses. For example: I think ...; I wonder...; I predict...; I find ...; I suspect...; I notice ... • Writing assignment: writing a letter to their favourite character; writing a letter to the author about the book; creating a new ending to a story; writing a prequel or sequel to the story; or writing their own story in the same genre.
(l) Pupils are taught the necessary conventions of written expression (for example: spelling, punctuation)	<p>As pupils’ writing ability develops, focus on things like audience, purpose, and what those tell us about the content of writing. Address specific writing conventions such as use of punctuation.</p>

(m) Pupils are given opportunities to choose books / stories	
(n) The teacher selects books / stories that are relevant to the lives of pupils	
(o) The teacher uses interactive teaching and learning materials	

Scores were assigned according to the following criteria:

0 (not observed/used)	The approach is not observed.
1 (met)	The teacher is making some attempt at using the approach and there is limited engagement of pupils.
2 (met to a high standard)	The teacher is using the approach effectively and all or the great majority of pupils understand and are engaged.

Annex 24: Teachers' examples of good practice

Teachers' responses to the question 'thinking about the lesson you have just given, can you give me examples from the lesson of: (i) active learning; (ii) supportive questioning; (iii) differentiated teaching and; (iv) checking for mastery. Responses were summarised in free text into the tablets. The tables below show the percentage of responses that included the most common 'meaningful' individual words.

'Meaningful' words here were considered to be those that provided some information about the teacher's thinking and/or practice. For example, we would exclude words like 'on' 'an' and 'the'. We would also exclude words that appear in the question.

Table 37: Frequency of key words recorded from teachers' examples of active learning

	Kenya	Nigeria	Ghana	Total
NA	2%	24%	2%	9%
Question	87%	42%	55%	61%
Answer	52%	15%	31%	33%
Ask	45%	31%	19%	32%
Participate	11%	15%	43%	22%
Board	37%	10%	14%	20%
Read	21%	4%	4%	10%
Activities	3%	5%	19%	9%
Asking	10%	11%	2%	8%
Class	7%	9%	8%	8%
Work	10%	3%	6%	6%
Demonstrate	14%	3%	2%	6%
Call	4%	12%	2%	6%
Explain	8%	3%	0%	4%
Exercise	7%	1%	2%	3%
Oral	10%	0%	0%	3%
Encourage	7%	0%	0%	2%
Discussion	7%	0%	0%	2%
Write	3%	3%	1%	2%
Opportunity	1%	2%	4%	2%
Understand	1%	4%	1%	2%
Groups	2%	2%	1%	1%

Table 38: Frequency of key words recorded from teachers' examples of supportive questioning

	Kenya	Nigeria	Ghana	Total
NA	3%	33%	11%	16%
Question	79%	57%	71%	69%
Answer	42%	17%	33%	31%
Understand	15%	10%	22%	15%
Asked	23%	16%	17%	19%

	Kenya	Nigeria	Ghana	Total
Time	14%	10%	13%	13%
Think	13%	8%	14%	12%
Correct	10%	10%	10%	10%
Help	9%	2%	12%	8%
Rephrase	8%	3%	9%	6%
Repeating	13%	0%	4%	6%
Explain	9%	1%	7%	6%
Encourage	3%	7%	0%	3%
Identify	10%	0%	0%	3%
Board	8%	1%	0%	3%
Work	6%	2%	1%	3%
Probing	3%	3%	4%	3%

Table 39: Frequency of key words recorded from teachers' examples of differentiated teaching

	Kenya	Nigeria	Ghana	Total
NA	14%	50%	30%	31%
Question	41%	5%	9%	18%
Each	5%	10%	7%	8%
Different	6%	12%	4%	8%
Understand	5%	10%	6%	7%
Slow	15%	1%	0%	5%
Giving	13%	1%	0%	5%
Involving	14%	0%	0%	5%
Equal	12%	1%	0%	4%
Help	10%	2%	0%	4%
Observed	2%	3%	5%	3%
Able	7%	1%	1%	3%
Explain	1%	4%	3%	3%
Assist	8%	0%	0%	3%
Abilities	7%	0%	0%	2%
Words	5%	2%	0%	2%
Concept	3%	0%	4%	2%
Opportunity	6%	0%	0%	2%
Asking	4%	1%	0%	2%
Fast	5%	0%	0%	2%
Repeat	3%	1%	2%	2%

Table 40: Frequency of key words recorded from teachers' examples of checking for mastery

	Kenya	Nigeria	Ghana	Total
NA	0%	34%	9%	14%
Questions	57%	23%	27%	36%

Asking	40%	37%	17%	31%
Exercise	34%	3%	39%	25%
Marks	43%	0%	10%	18%
Checking	30%	14%	6%	17%
Work	33%	9%	8%	17%
Understanding	16%	15%	13%	15%
Asked	12%	13%	11%	12%
Correctly	23%	3%	2%	9%
Board	13%	5%	9%	9%
Homework	13%	0%	4%	6%
Assisting	12%	2%	2%	5%
Answering	9%	3%	4%	5%
Read	8%	2%	2%	4%
Sentence	9%	0%	3%	4%
Explain	4%	4%	1%	3%
Activity	9%	0%	0%	3%
Able	4%	1%	3%	3%
Orally	6%	0%	1%	2%
Examples	3%	0%	2%	2%

Annex 25: Supplementary Community Based Attitudes Analysis

Table 41: Attitudes of Parents towards Education for Girls

	Nigeria		Kenya		Ghana	
	Intervention	Control	Intervention	Control	Intervention	Control
Home / community level						
Attitudes towards girl's education						
Parent has been inside girl's classroom	38.56	42.25	88.45	89.29	73.37	72.27
Parent has been informed of the girl's progress in the last 12 months	69.70**	63.79	89.27	91.23	67.08	66.89
Parent aware of any changes to teaching practices at girl's school	38.05***	29.43	56.17	54.56	54.43***	46.00
Perceived quality of teaching the girl receives						
-Very good	43.04	43.12	20.76	19.35	32.13	28.64
-Good	49.91	49.17	52.46	56.08	59.23	61.57
-Neither good nor poor	6.77	6.73	21.87	18.79	6.47	8.46
-Poor	0.28	0.81	3.80	4.37	1.20	0.67
-Very poor	0.00	0.17	1.11	1.40	0.36	0.11
Perceived change in teaching quality						
-Improved	87.70	84.63	66.11	67.58	85.93*	86.68
-Stayed the same	11.65	14.65	25.02	21.77	11.93*	12.34
-Gotten worse	0.65	0.71	8.87	10.65	1.51*	0.61
A girl is just as likely to use her education as a boy						
-Strongly agree	58.13	58.33	73.39	71.28	58.96	65.50
-Agree	37.96	35.80	23.30	24.94	38.04	32.90
-Neither agree nor disagree	0.62	2.37	1.47	1.62	1.80	0.74
- Disagree	2.58	2.42	1.01	1.57	0.70	0.14
-Strongly disagree	0.71	1.08	0.83	0.59	0.00	0.41
When it is acceptable for the girl to not attend school						
-Child may physically harm or tease other children	14.86**	11.35	15.02	13.20	19.64	18.22
-Child needs to work	3.08**	4.21	5.93	5.23	9.46	6.95
- Child needs to help at home	2.81**	5.11	5.13	5.66	8.83	4.91

Is married or getting married	20.69**	29.15	17.55	13.92	23.46	18.73
-Child is too old	12.79**	12.84	7.81	7.99	20.27	18.71
-Child has physical or learning needs that the school cannot meet	13.70**	13.19	13.78	9.77	30.80	27.50
-Child is unable to learn	10.99**	11.31	11.34	8.51	29.15	26.04
-Education is too costly	21.54**	17.77	19.61	16.89	23.77	21.94
-Child is a mother	18.13**	23.69	20.52	18.62	39.43	39.94
-Child is sick	11.02**	7.67	5.68	6.15	3.29	3.41

Source: DP2 household survey 2018. All indicators are reported by caregivers.

Table 42: Support and Involvement of the Community

	Nigeria		Kenya		Ghana	
	Intervention	Control	Intervention	Control	Intervention	Control
Support and involvement						
Girl receives academic support or tutoring	41.60***	31.33	28.69	27.39	18.68	16.62
Parent attended school committee or education group meeting	52.59***	43.68	47.61	49.95	90.85	89.73
Parent a member of school committee or education group	7.39	7.00	2.75	3.35	39.76***	32.73
Other member of household a member of school committee or education group	11.31	10.14	1.56	1.44	10.71	8.78
Actions or initiatives this committee taken in the last 12 months						
-Monitor Student Attendance	26.79**	25.02	44.19	59.98	57.97	61.29
- Monitor Teacher Attendance	13.01**	13.58	20.93	42.43	33.57	34.22
-Raise Funding	21.43**	15.83	20.93	9.84	19.81	19.05
-Improve School Infrastructure	42.86**	33.11	34.88	29.43	44.69	35.38
-Support Students Financially	6.55**	6.01	6.98	10.97	3.62	5.80
-Other	4.17**	0.59	18.60	7.75	1.69	1.28
Involved in making decisions about the girl's education						
-Child herself	-	-	22.27	29.02	-	-
- Mother	62.67	62.28	82.49	83.08	71.74	74.46
-Father	88.36	89.53	58.57	59.30	69.64	74.31
-Brother	17.87	15.44	1.56	3.22	9.52	10.88
-Sister	4.18	3.23	1.74	2.10	3.81	4.23

-Husband	0.89	0.33	0.09	0.00	0.20	0.38
-Mother in law	0.09	0.12	0.00	0.00	0.40	0.13
-Father in law	0.27	0.12	0.00	0.00	0.20	0.55
-Other female relative	7.20	7.07	8.16	8.41	24.85	18.44
-Other male relative	14.49	15.22	2.84	1.80	11.52	10.71
-Other non-relative	0.44	0.71	0.46	1.05	0.30	0.81
Parents listen to the girl when making decisions about her education	43.09*	48.02	86.32	87.56	76.06	76.66

Source: DP2 household survey 2018. All indicators are reported by caregivers.

Table 43: Aspirations of Parents for Girl's Education

	Nigeria		Kenya		Ghana	
	Intervention	Control	Intervention	Control	Intervention	Control
Aspirations						
Regardless of marriage, level of education parents would like the girl achieve						
-Primary	1.87***	5.10	0.09	0.26	5.06	1.81
-Secondary	25.84***	31.65	2.12	1.67	0.72	0.86
-Technical/ vocational/ commercial/ diploma	15.54***	13.48	3.32	4.68	16.53	20.22
-University	56.74***	49.77	94.46	93.38	77.17	76.80
It is worth investing in the girl's education even when funds are limited						
-Strongly agree	56.46	59.07	71.49	70.11	66.47	72.38
-Agree	40.16	37.03	25.76	27.32	32.03	26.66
-Neither agree nor disagree	0.53	1.15	1.28	0.75	0.60	0.37
-Disagree	2.14	1.85	0.46	0.89	0.40	0.15
-Strongly disagree	0.71	0.91	1.01	0.92	0.00	0.13

Source: DP2 household survey 2018. All indicators are reported by caregivers.

Table 44: Attitudes of Girls towards Education

	Nigeria		Kenya		Ghana	
	Intervention	Control	Intervention	Control	Intervention	Control
Attitudes of Girls						
Is attending school important for their goals for when they grow up	99.10	99.60	98.90**	97.80	99.20	98.70
What stops them from reading when they want to						

Lack of things to read	10.80	9.20	4.60	6.50	20.20	20.30
Lack of time due to other duties inside and outside the home	66.30	62.40	13.50	13.50	78.80	83.60
Lack of quiet space to read	12.70	12.60	10.60	10.50	18.20	22.60
Lack of light/ electricity	4.30	3.40	3.60	6.30	8.20	15.40
Lack of help/ support	12.60	9.70	2.60	1.50	13.60	13.60
Lack of motivation/ don't like reading	9.00	7.40	3.00	3.00	5.10	8.90
Nothing stops them from reading	31.50	33.60	63.10	62.40	22.70	21.50
Responsibilities outside of school						
-None	1.10	1.00	6.70	6.00	0.80***	0.80
-Looking after children	34.70	45.50	15.60	18.70	23.30***	22.00
-Fetching water and preparing food	98.50	98.6	91.40	91.10	95.80***	95.10
-Cleaning	20.00	33.90	3.10	5.60	32.10***	30.90
- Earning money for the household	21.80	22.70	1.10	0.70	39.30***	31.70
If they would like to achieve university level	38.00	41.60	71.70	70.90	46.70	50.10
Given their current situation, do they expect to reach the level of education they want	87.20**	83.10	85.40*	82.60	86.80	85.20
What they expect to be doing after they finish school						
-Studying	32.80*	33.50	30.20**	25.30	9.30	11.50
-Working	61.50*	58.30	78.00**	83.60	93.60	94.30
-Married	40.40*	44.90	1.70**	3.40	30.70	30.20
Get nervous when they do math in front of others						
-Strongly disagree	8.40	9.60	22.30**	25.90	19.10	16.60
-Disagree	33.00	33.80	49.00**	46.60	25.40	32.00
-Neither agree nor disagree	0.60	0.30	3.40**	2.90	2.80	2.70
-Agree	45.20	45.00	16.70**	18.40	31.10	26.00
-Strongly agree	12.80	11.30	8.60**	6.00	21.50	21.50
Get nervous when they read in front of others						
-Strongly disagree	7.20	8.30	18.40	22.30	14.80*	13.70
-Disagree	31.80	34.40	49.70	46.80	23.60*	29.90
-Neither agree nor disagree	0.70	0.20	3.30	3.60	2.70*	2.20
-Agree	46.20	44.50	20.40	20.20	30.80*	29.00
-Strongly agree	14.00	12.60	7.90	7.00	27.80*	24.00

Feel confident answering questions in class						
-Strongly disagree	1.40	1.40	2.90	3.30	3.70	3.20
-Disagree	14.30	14.20	8.60	10.00	12.60	13.20
-Neither agree nor disagree	2.50	1.90	6.70	5.80	6.10	6.90
-Agree	60.60	62.00	45.30	42.50	39.40	41.00
-Strongly agree	21.10	20.40	36.50	37.90	37.20	33.80

Source: DP2 girl survey 2018.

Annex 26: Beneficiary Numbers

In this section, we present enrolment data from three different sources i.e. DP-2 baseline, data provided by DLA and most recent EMIS data for each of the three countries. The enrolment data is disaggregated by region and gender.

Table 45: Nigeria Enrolment Data

Nigeria - Treatment schools only										
LGA	School Name	Baseline - 2018			DLA Data - Oct/Nov 2017*			EMIS Data - 2017		
		Girls	Boys	Total	Girls	Boys	Total	Girls	Boys	Total
Bagwai	Jauben Yamma Primary School	166	332	498	146	279	425	210	312	522
Bagwai	Majingini Nomadic Primary School	185	233	418	208	265	473	211	225	436
Bagwai	Tudara Primary School	168	183	351	191	229	420	168	208	376
Bagwai	Tuga Primary School	152	306	458	166	349	515	152	312	464
Bebeji	Fandabba Nomadic Primary School	95	132	227	107	145	252	114	121	235
Bebeji	Kasuwa Dogo Primary School	127	133	260	99	121	220	141	168	309
Bebeji	Mataki Primary School	64	103	167	63	93	156	62	112	174
Bebeji	Unguar Yakubu li Primary School	172	189	361	127	219	346	174	199	373
Bebeji	Unguar Yakubu Primary School	201	405	606	290	472	762	242	400	642
Dala	Abdulhamid Hassan Model Primary School**	476	576	1052	No data	No data	No data	478	499	977
Dala	Auwal Sani Mem Ps	145	134	279	668	539	1207	144	134	278
Dala	Dala Noi Islamiyya Primary School	126	145	271	120	180	300	185	208	393
Dala	Gwammaja Model Primary School	485	558	1043	281	211	492	393	443	836
Dala	Hadaratul Islamiyya Primary School	120	112	232	610	650	1260	339	322	661
Dala	Isma'Lla Islamiyya Primary School	1075	1011	2086	335	349	684	1536	1675	3211
Dala	Kurnar Asabe Islamiyya	281	240	521	280	320	600	812	395	1207
Dala	Yahaya Bala Model Ps	130	105	235	579	435	1014	121	104	225
Dawakin Kudu	Redblock Islamiyya Primary School	121	101	222	49	276	325	129	103	232
Dawakin Kudu	Sheak D/Bauchi	206	131	337	146	67	213	231	143	374
Dawakin Kudu	Takai Primary School	217	184	401	928	1321	2249	185	197	382
Dawakin Kudu	Tsakuwa Central Primary School	1574	1489	3063	332	338	670	1551	1675	3226
Dawakin Kudu	Zogarawa Islamiya	269	199	468	261	104	365	196	194	390

Nigeria - Treatment schools only										
LGA	School Name	Baseline - 2018			DLA Data - Oct/Nov 2017*			EMIS Data - 2017		
		Girls	Boys	Total	Girls	Boys	Total	Girls	Boys	Total
Gabasawa	Sauna Primary School	102	152	254	163	199	362	225	267	492
Gabasawa	Tofai Primary School	339	230	569	364	347	711	135	185	320
Gabasawa	Yama Primary School	182	154	336	337	427	764	180	186	366
Gabasawa	Yautar Kudu Ps	125	180	305	167	133	300	373	462	835
Gabasawa	Yumbu Primary Schooll	128	161	289	145	220	365	223	232	455
Garko	Lamire Central Primary School	209	346	555	464	629	1093	152	304	456
Garko	Shuwo Primary School	130	175	305	703	764	1467	109	138	247
Kano Municipal	Aminu Kano Islamiyya**	199	183	382	No data	No data	No data	125	147	272
Kano Municipal	B B Talle Islamiyya Primary School**	92	89	181	No data	No data	No data	199	166	365
Kano Municipal	Dambazau Sps Isl	199	219	418	465	458	923	330	309	639
Kano Municipal	Taahud Islamiyya	165	123	288	1102	1102	2204	142	130	272
Kano Municipal	Yakasai D/Z Isl	166	151	317	160	220	380	159	160	319
Kano Municipal	Yakasai Model Primary School	161	215	376	1400	498	1898	157	195	352
Kibiya	Faran Islam 'A' Prim Sch	68	70	138	137	129	266	86	89	175
Kibiya	Kibiya Girls Child Education Primary School	89	0	89	386	0	788	86	0	86
Kibiya	Saya-Saya Islamiyya Primary School	166	89	255	165	252	417	140	91	231
Kibiya	Tarai Islamiyya Primary School	243	98	341	877	1301	2178	293	94	387
Kibiya	Unguar Gai Primary School	162	192	354	291	102	393	174	189	363
Kura	Azoren Waje Primary School	589	336	925	405	364	769	123	149	272
Kura	Butalawa Gawo Primary School	605	281	886	265	151	416	159	217	376
Rano	Madachi Islamiyya Primary School	257	74	331	216	351	567	224	62	286
Rano	Nurun Ala Nurun Islamiyya Primary School	170	74	244	200	150	350	161	74	235
Rano	Ruwan Kanya Central Primary School	164	173	337	863	467	1330	141	162	303
Rano	Shangu Primary School	157	180	337	234	265	499	181	177	358
Rano	Zinatuddin Islamiyya Primary School	113	79	192	417	691	1108	82	61	143

Nigeria - Treatment schools only										
LGA	School Name	Baseline - 2018			DLA Data - Oct/Nov 2017*			EMIS Data - 2017		
		Girls	Boys	Total	Girls	Boys	Total	Girls	Boys	Total
Rimin Gado	Bambara Islamiya Primary School	196	137	333	320	360	680	193	148	341
Rimin Gado	Fatima Zahrau Islamiyya Dokadawa	174	120	294	149	161	310	190	113	303
Rimin Gado	Indabo Islamiya Primary School	200	139	339	277	248	525	157	88	245
Rimin Gado	Nurur Yakin Islamiyya Primary School	256	143	399	360	229	589	314	140	454
Rimin Gado	Yalwan Danziyal Science Model Primary School	220	263	483	208	952	1160	177	204	381
Takai	Diribo Central Primary School	246	268	514	250	450	700	196	289	485
Takai	Takai Islamiyya	358	284	642	468	476	944	359	255	614
Tarauni	Sabilu Rashad	383	365	748	152	143	295	356	425	781
Tarauni	Tahir Islamiyya Primary School	267	263	530	55	45	100	152	133	285
Tarauni	Ungwan Gano Special Primary School	374	393	767	50	70	120	405	401	806
Tofa	Gajida Nomadic Primary School	232	361	593	481	657	1138	154	103	257
Tofa	Lambu Bakin Titi Islamiyya Primary School	275	302	577	440	520	960	264	293	557
Ungogo	Bachirawa Gabas Primary School	947	799	1746	340	333	673	694	694	1388
Ungogo	Gayawa Special Primary School	2932	2758	5690	300	200	500	1972	2158	4130
Ungogo	Miftahul Rashad Model Islamiyya Nps	116	125	241	548	487	1035	270	296	566
Ungogo	Usman Bin Khalid Islamiya Primary School	326	240	566	968	1237	2205	347	240	587
Ungogo	Zainul Islam Primary School Chiromawa	424	0	424	484	524	1008	273	433	706
Ungogo	Zaura Babba Central Primary School	813	718	1531	2550	2450	5000	691	742	1433
Total		20,274	18,703	38,977	24,312	25,724	50,438	19,297	19,550	38,847

Notes:

*DLA Enrollment data for Nigeria was gathered from the schools during the month of October and November 2017 by DLA Nigeria staff

** Enrollment data is missing for these schools

Table 46: Kenya Enrolment Data

Kenya - Treatment schools only												
County	Sub-county	Formal/Non-formal	School Name	Baseline - 2018			DLA Data - [insert source]*			EMIS Data - 2016 **		
				Girls	Boys	Total	Girls	Boys	Total	Girls	Boys	Total
Kajiado	Isinya	Formal	Kepiro	201	245	446	353	306	659	234	214	
Kajiado	Kajiado North	Formal	Kerarapon	141	186	327	175	192	367	126	154	
Kajiado	Sultan Hamud	Formal	Lesonkoyo	131	157	288	170	193	363	142	158	
Kajiado	Kajiado North	Formal	Oloshoibor	135	124	259	145	132	277	122	126	
Kajiado	Kajiado North	Formal	Upper Matasia	176	198	374	212	221	433	183	200	
Kiambu	Limuru	Formal	Limuru Model	737	744	1481	875	833	1708	758	710	
Kiambu	Limuru	Formal	Rwaka	364	366	730	370	361	731	400	394	
Kiambu	Thika West	Formal	Thika	381	394	775	418	445	863	378	374	
Machakos	Mavoko	Formal	Kinanie	224	240	464	291	306	597	260	256	
Machakos	Mavoko	Formal	St Pauls' Primary School	579	570	1149	623	501	1124	532	568	
Machakos	Mwala	Formal	Yikiatine	158	149	307	133	124	257	113	98	
Nairobi	Starehe	Formal	City Pri. Sch.	232	256	488	290	291	581	311	310	
Nairobi	Westlands	Formal	Farasi Lane	255	280	535	298	276	574	299	289	
Nairobi	Starehe	Formal	Juja Road	489	423	912	594	676	1270	466	484	
Nairobi	Westlands	Formal	Kabete Vet Lab	613	623	1236	614	725	1339	576	612	
Nairobi	Kasarani	Formal	Kamiti Primary	613	664	1277	593	580	1173	573	557	
Nairobi	Westlands	Formal	Karura Forest	193	181	374	165	189	354	114	103	
Nairobi	Kasarani	Formal	Kiwanja Primary	653	593	1246	651	614	1265	671	588	
Nairobi	Kasarani	Formal	Mahiga Primary	804	763	1567	843	725	1568	786	750	
Nairobi	Njiru	Formal	Mihang'O	479	486	965	512	546	1058	500	476	
Nairobi	Langata	Formal	Ngong Forest Primary	295	334	629	312	359	671	284	282	
Nairobi	Njiru	Formal	Ng'Undu	440	433	873	475	444	919	379	410	
Nairobi	Makadara	Formal	St Elizabeth Primary School	830	784	1614	883	810	1693	729	704	
Nairobi	Embakasi	Formal	Umoja 1 Primary	745	731	1476	743	710	1453	563	588	
Nairobi	Westlands	Formal	Westlands	636	655	1291	690	678	1368	620	659	
Nairobi	Kibra	Non-formal	Anwa Junior Academy	180	197	377	210	196	406	No data	No data	N

Kenya - Treatment schools only												
County	Sub-county	Formal/Non-formal	School Name	Baseline - 2018			DLA Data - [insert source]*			EMIS Data - 2016 **		
				Girls	Boys	Total	Girls	Boys	Total	Girls	Boys	Total
Nairobi	Dagoreti	Non-formal	Bensophil Community Centre	166	143	309	240	247	487	No data	No data	N
Nairobi	Njiru	Non-formal	Boston Children Centre	158	160	318	191	189	380	No data	No data	N
Nairobi	Njiru	Non-formal	Dandorra Minorate Education Centre	149	165	314	198	225	423	No data	No data	N
Nairobi	Embakasi	Non-formal	Evana Junior School	215	237	452	245	185	430	No data	No data	N
Nairobi	Embakasi	Non-formal	High Gate Learning Cen.	136	97	233	134	115	249	No data	No data	N
Nairobi	Njiru	Non-formal	Jupiter Community Learning Centre	469	442	911	389	211	600	No data	No data	N
Nairobi	Mathari	Non-formal	Kag Mathare / Huruma	166	198	364	785	665	1450	No data	No data	N
Nairobi	Kasarani	Non-formal	Landmark	406	331	737	383	344	727	No data	No data	N
Nairobi	Kasarani	Non-formal	Lucky Shamir Educational Center	138	134	272	431	364	795	No data	No data	N
Nairobi	Kibra	Non-formal	Magoso Primary School	202	180	382	231	214	445	No data	No data	N
Nairobi	Njiru	Non-formal	Njiris Education Centre	186	197	383	288	272	560	No data	No data	N
Nairobi	Kibra	Non-formal	Saviour King Education Centre	228	182	410	314	268	582	No data	No data	N
Nairobi	Embakasi	Non-formal	Sharp Education Centre	296	270	566	409	407	816	No data	No data	N
Nairobi	Makadara	Non-formal	St Johns Korogocho	270	289	559	474	572	1046	No data	No data	N
Nairobi	Kamukunji	Non-formal	St Juliet Primary	215	234	449	355	296	651	No data	No data	N
Nairobi	Embakasi	Non-formal	St Peter Community	273	253	526	368	400	768	No data	No data	N
Nairobi	Kibra	Non-formal	Stara Rescue Centre And School	170	156	326	300	215	515	No data	No data	N
Nairobi	Kibra	Non-formal	Ushirika Children Centre	169	141	310	161	172	333	No data	No data	N
Nairobi	Kibra	Non-formal	Zelyn Academy	185	159	344	275	145	420	No data	No data	N
Wajir	Wajir West	Formal	Adamasajida	189	288	477	325	399	724	228	273	
Wajir	Wajir West	Formal	Arbajahan	280	305	585	378	296	674	254	329	
Wajir	Bute	Formal	Bute Primary	222	283	505	292	391	683	236	306	
Wajir	Eldas	Formal	Eldas	211	354	565	436	257	693	262	417	
Wajir	Wajir East	Formal	Furaha	336	451	787	414	571	985	309	375	
Wajir	Wajir East	Formal	Got Ade	498	576	1074	482	612	1094	492	468	
Wajir	Wajir West	Formal	Hadado	307	490	797	340	562	902	319	444	
Wajir	Wajir East	Formal	Hodhan	346	395	741	455	540	995	350	338	

Kenya - Treatment schools only												
County	Sub-county	Formal/Non-formal	School Name	Baseline - 2018			DLA Data - [insert source]*			EMIS Data - 2016 **		
				Girls	Boys	Total	Girls	Boys	Total	Girls	Boys	Total
Wajir	Wajir East	Formal	ICF	1055	1160	2215	696	1277	1973	1168	1794	
Wajir	Wajir East	Formal	Kalkacha	484	506	990	656	701	1357	385	454	
Wajir	Wajir West	Formal	Kanjara Primary	112	129	241	135	125	260	111	138	
Wajir	Wajir East	Formal	Makror	489	546	1035	665	707	1372	455	570	
Wajir	Bute	Formal	Malaba	177	240	417	216	275	491	164	235	
Wajir	Habaswein	Formal	Ndege	112	116	228	157	213	370	154	203	
Wajir	Wajir East	Formal	Wajir Girls Primary	613	0	613	800	0	800	No data	No data	N
			Total	20,312	20,583	40,895	24,256	23,865	48,121			
			Total - Formal Schools ONLY	15,935.00	16,418.00	32,353.00	17,875.00	18,163.00	36,038.00	15,006.00	16,408.00	31

Notes:

*DLA Enrollment data for Kenya was gathered from schools in Sept/Oct 2017 by DLA staff

** Enrollment data for non-formal schools was not available from EMIS.

Table 47: Ghana Enrolment Data

Ghana - Treatment schools only										
District	School Name	Baseline - 2018			DLA Data - [insert source]*			EMIS Data - 2016/17		
		Girls	Boys	Total	Girls	Boys	Total	Girls	Boys	Total
Central Gonja	Gbirigi Kg/D/A Primary	72	79	151	149	138	287	115	131	246
Central Gonja	Kigbirpe D/A Primary	90	127	217	168	162	330	230	251	481
Central Gonja	Kpabuso D/A Kg/ Primaryschool	112	126	238	236	241	477	240	258	498
Central Gonja	Kpabuso Ibadur Rahman E/A Kg/Primary	66	96	162	91	122	213	141	147	288
Central Gonja	Kpasera D/A Kg/Primary	71	72	143	147	168	315	143	148	291
Central Gonja	Yapei Presby Primary A	125	132	257	192	205	397	247	259	506
East Gonja	Binjai Presby Kg/Primary	136	147	283	223	212	435	270	281	551
East Gonja	Iddrisiya Islamic Kg/Primary	132	138	270	158	172	330	188	196	384
East Gonja	Kpembe D/A Primary	142	118	260	202	170	372	218	216	434
East Gonja	Naamu R/C Kg/ Primary	128	132	260	167	197	364	248	261	509
East Gonja	Sakafatu Islamic Kg/Primary	161	146	307	214	232	446	300	293	593
East Gonja	Salaga D/A Kg/Primary	244	272	516	259	328	587	456	450	906
East Gonja	Yakubupe D/A Kg/Primary	71	88	159	75	85	160	135	143	278
Karaga	Binduli Methodist Kg/Primary	64	83	147	59	77	136	121	129	250
Karaga	Namburugu D/A Primary/Kg	53	57	110	109	159	268	191	211	402
Karaga	Nangung-Nayili D/A Kg/Primary	60	66	126	91	91	182	141	147	288
Karaga	Nasiria T.I. Ahmadiyya Kg/Primary	84	105	189	143	173	316	192	197	389
Karaga	Nyong Guma E/A Kg/Primary School	172	159	331	278	289	567	259	279	538
Karaga	Pishigu D/A Primary	160	184	344	143	165	308	332	321	653
Karaga	Yemo-Karaga D/A Kg/Primary	69	86	155	20	48	68	96	115	211
Sagnarigu	Bambawia Islamic Basic School	118	119	237	160	222	382	172	182	354
Sagnarigu	Kalpohin Anglican Primary 'A'	115	99	214	105	118	223	212	205	417
Sagnarigu	Kalpohin Anglican Primary 'B' /Kg	127	121	248	149	146	295	232	221	453
Sagnarigu	Kalpohin Kamaria Islamic Primary/Kg	91	60	151	112	98	210	142	138	280
Sagnarigu	Kanvilli Tawfi Kiya Islamic Kg/Primary	110	114	224	151	176	327	205	197	402
Sagnarigu	St. Augustine'S R/C Primary/Kg	112	99	211	180	152	332	216	211	427
Sagnarigu	Tishigu Anglican Primary School 'A'	117	116	233	177	150	327	268	253	521
Sagnarigu	Wurishe Community Albahdal Primary/Kg	101	74	175	40	26	66	166	163	329
Savelugu	Diare E/A Primary 'A'	167	176	343	318	349	667	162	174	336

Ghana - Treatment schools only										
District	School Name	Baseline - 2018			DLA Data - [insert source]*			EMIS Data - 2016/17		
		Girls	Boys	Total	Girls	Boys	Total	Girls	Boys	Total
Savelugu	Janjori-Kukuo Ame Zion	130	158	288	177	209	386	128	155	283
Savelugu	Nakpanzoo Ame Prim.	65	64	129	90	90	180	63	66	129
Savelugu	Rashadiya E/A Primary	111	119	230	68	80	148	96	108	204
Savelugu	Savelugu Exp. Primary 'A'	461	366	827	471	451	922	423	332	755
Savelugu	Yong M/A Primary School	109	164	273	162	276	438	106	155	261
Tamale Metro	Al-Markazia Islamic Primary	112	90	202	110	97	207	139	132	271
Tamale Metro	Bagliga Presby Primary	91	87	178	105	126	231	156	183	339
Tamale Metro	Bethany M/A Primary	132	102	234	120	106	226	230	222	452
Tamale Metro	Dabokpa Failiya Islamic Primary	98	95	193	86	74	160	158	159	317
Tamale Metro	Dakpema M/A Primary 'A'	111	79	190	193	177	370	264	250	514
Tamale Metro	Police Barracks M/A Primary	373	308	681	311	200	511	585	570	1155
Tamale Metro	Sobahiya M/A Kg Primary	91	96	187	108	112	220	180	187	367
Tamale Metro	St. Joseph'S R/C Primary 'B'	188	154	342	170	151	321	295	292	587
Tamale Metro	St. Joseph'S R/C Primary 'C'	167	142	309	284	302	586	293	295	588
Tamale Metro	St. Peter'S R/C Primary 'A'	127	100	227	108	106	214	199	196	395
Tamale Metro	Zogbeli Ahmadiyya Primary	112	80	192	117	92	209	150	143	293
Tamale Metro	Zogbeli M/A Primary 'A'	194	149	343	203	173	376	330	324	654
Tolon	Golinga Presby Primary	23	23	46	91	111	202	141	158	299
Tolon	Nyankpala D/A Primary 'B'	150	168	318	531	584	1115	320	332	652
Tolon	Tali E/A Kg, Primary School	84	104	188	138	164	302	158	160	318
Tolon	Tolon D/A Model Primary School	187	222	409	210	280	490	371	374	745
Tolon	Yipelgu A.M.E Zion Primary School	77	109	186	131	110	241	175	199	374
West Mamprusi	Takorayiri D/A Primary	94	82	176	131	119	250	192	200	392
West Mamprusi	Walewale D/A Primary 'B1'	174	168	342	173	178	351	319	313	632
West Mamprusi	Walewale Marakaz E/A Prim.	78	67	145	103	103	206	124	129	253
West Mamprusi	Wungu D/A Primary 'A'	246	223	469	529	583	1112	479	466	945
West Mamprusi	Wungu D/A Primary 'B'	178	147	325	280	249	529	288	278	566
Yendi	Good Shepherd	151	140	291	223	300	523	260	266	526
Yendi	Nakpachei E P	249	322	571	328	397	725	490	527	1017
Yendi	Pion R C	110	112	222				168	156	324
Yendi	Yendi Jubilee Prim.	192	176	368	100	91	191	266	298	564

Ghana - Treatment schools only										
District	School Name	Baseline - 2018			DLA Data - [insert source]*			EMIS Data - 2016/17		
		Girls	Boys	Total	Girls	Boys	Total	Girls	Boys	Total
Yendi	Yendi M A Blk. B	264	266	530	191	276	467	452	489	941
Yendi	Yendi R C Blk. A	266	284	550	340	339	679	488	478	966
	Total	8,465	8,357	16,822	10,898	11,577	22,475	14,524	14,769	29,293

Notes:

*DLA Enrollment data for Ghana was sourced from the EMIS, but not clear from which year

